



# **Public Participation and EIA Effectiveness: Empirical Case Studies in Hong Kong**

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## **DECLARATION**

This is a self-funded research project. While the author worked as an environmental consultant in Hong Kong and involved in several EIA projects, the author does not have any direct involvement in any of the case studies used in this study.

## ABSTRACT

While public participation is now considered a crucial component in Environmental Impact Assessment (EIA) practice, many contexts on the role and function of public participation in EIA practices have yet to be explored. There is a need for advancing the theories on the EIA in the light of nowadays challenges. This PhD thesis adopted an inductive approach to seek answers to the research questions of "*Does public participation make EIA more effective?*" and "*How does public participation make EIA more effective?*". The research questions emphasise the substantive effectiveness of EIA, arguing that EIA could only be claimed as effective if it could achieve the substantive objectives behind its design, which include its procedural functionality, normative and legitimacy functions and transformative functions.

Empirical case studies were conducted in Hong Kong to examine the public participation in Hong Kong's EIA practices during the preparation of the EIA report, the review of the EIA report, and the post-EIA approval stage. Three distinct EIAs, i.e. *Tung Chung New Town Extension*, *Development of the Integrated Waste Management Facilities Phase 1*, and *South Island Line (East)* were reviewed and analysed. The case studies reveal the public participation outcomes in achieving the substantive objectives of the EIA, with the influence of the unique social-political context in Hong Kong.

The case studies found that public participation could play significant roles in the procedural functionality, especially in information circulation and policing; however, the normative and legitimacy functions are mixed, and the transformative functions are limited. The empirical findings suggested that contextual factors have much influence on public participation outcomes. The existing Impact Assessment models could not fully incorporate the implications of contextual factors in practices. Meanwhile, some similar findings were observed in regions with other contexts. Further studies to comprehend the understanding of the influence of context in IA practices are recommended.

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## 1. INTRODUCTION

While the need for Environmental Impact Assessment (EIA) is widely recognised, the effectiveness of EIA in achieving its goals in protecting the environment remains a matter of concern. With EIA more often than not being unable to stop environmentally unfriendly projects, there is an ongoing discussion about its role and objectives (e.g. Rozema and Bond, 2015). It was estimated that more than 10,000 refereed IA papers had been published over the 20 years leading to 2015 (Fischer and Noble, 2015). However, there is still ample need for further research to develop a distinct IA theory, to investigate empirical evidence of IA practices; and to strengthen the interaction between theory and practice (Fischer and Noble, 2015; Kørnø, 2015). In recent discourse, public participation is a commonly covered subject. While the rationale and benefits of incorporating public participation in EIA have been well recognised (e.g. O’Faircheallaigh, 2010; Glucker *et al.*, 2013), the outcomes of public participation in practices have been said to be mixed (e.g. Del Furia and Wallace-Jones, 2000; Nadeem and Fischer, 2011; Sinclair and Diduck, 2017). There is a knowledge gap in the understanding of how the desired functions of public participation could be achieved in actual practice. A four-year PhD research had been conducted to have an in-depth investigation about the roles and functions of public participation in EIA effectiveness. The research aimed to use empirical findings in Hong Kong to provide insights for advancing the international discourse on public participation and EIA effectiveness. This PhD thesis presents the process and findings.

### 1.1. Research Background

#### 1.1.1. The nature of EIA

Environmental Impact Assessment (EIA) is a tool that evolved in the 1960s as a response to public apprehension and concern about the environment and health of people, after the environmental controversies in the 1950s and early 1960s (Caldwell, 1988). The political intent of EIA was to introduce a process to provide decision-makers with indications of the likely environmental consequences of their

actions (Wathern, 1988). This process includes consideration of environmental values, and scientific means for the calculation of the project's impact on those environmental values (Dryzek, 2013). As Caldwell (1988) pointed out, the assumption behind the original setting of EIA is that "a systematic, focused, interdisciplinary use of science may improve the quality of planning and decision-making."

In many EIA related legislations such as the US NEPA and the EU EIA Directive, the need for impact assessment is recognised in the protection of the natural environment and human health. For example, as early as 1985, the EU EIA Directive stated that

*"Whereas the effects of a project on the environment must be assessed in order to take account of concerns to protect human health, to contribute by means of a better environment to the quality of life, to ensure maintenance of the diversity of species and to maintain the reproductive capacity of the ecosystem as a basic resource for life"* (European Commission, 1985)

However, it has also been recognised that there is usually no direct causal link between EIA and environmental protection. Clark & Herington (1988 p.3) viewed EIA as a tool to "aid planning decision making rather than an environmental protection measure". Roberts & Roberts (1984 p.100) also noted that the aim of EIA was to ensure the decision is made based on informed knowledge instead of determining the balance of environmental considerations and other considerations for decision-maker.

The original intent of setting up and implementing EIA is merely a starting point. EIA is supposed to ensure that the environmental impacts of projects are assessed before decisions to progress are made. There is widespread agreement, though, that simply providing environmental information does not necessarily lead to achieving the goals of protecting the environment and human health. Nevertheless, the principles of EIA have been developed much since then.

### 1.1.2. The Development of EIA

Over the last 50 years, EIA has been developed and evolved in various ways. At first, it was internationalised and institutionalised. Since the introduction of the US NEPA in 1969, EIA has been established as a formal process in many countries. More than 140 countries have introduced EIA systems (Glasson, Therivel and Chadwick, 2012, others have argued that EIA is now a requirement in literally all countries worldwide). In addition to national policies, the use of EIA had also been recognised in international organisations and international financial institutions. For example, the United Nations Economic Commission for Europe (UNECE) has negotiated conventions and protocols for EIA (UNCEC, 2018); the World Bank and the European Investment Bank adopted EIA as part of the environmental safeguard measures (World Bank, 2018; EIB, 2013). EIA has become a heterogeneous process, with EIA in practices varying with regards to differences in legislation, administration, etc. (e.g. Glasson, Therivel and Chadwick, 2012, also Chapter 2).

Meanwhile, variations of the EIA emerged. The scope of impact assessment had expanded to cover natural, social and economic effects of projects, policies, plans, technologies and activities (Lawrence, 1997). The emergence of Strategic Environmental Assessment explicitly extended the application of impact assessment to the decision making of policies, plans and programs (IAIA, 2009). Besides environmental impacts, new subjects entered the area of impact assessment, some of them leading to independent impact assessment instruments, such as Health Impact Assessment and Social Impact Assessment (see IAIA, 2009). At the same time, some other topics are also now routinely included in EIA. For example, population and human health impacts have been incorporated in the amendment of the EU EIA Directive in 2014 (European Commission, 2014).

Regarding the implementation of practices of EIA, Wood (2003) summarised seven main themes of the evolution of EIA by the early 2000s:

- *Recognition of the crucial relationship of EIA to its broader decision making and environmental management context, and an acknowledgement of the subjective and political nature of the EIA process;*

- *A tendency to codification and away from discretion;*
- *Refinement of EIA systems by the adoption of additional elements;*
- *A concern to increase the quality of EIA;*
- *A concern to increase the effectiveness of EIA and ensure efficiency;*
- *The linkage of EIA with ongoing environmental management systems;*  
*and,*
- *The recognition that many variables are already resolved by the time the EIA of projects takes place.*

*(Simplified from Wood, 2003 pp 5-6)*

The seven identified themes suggested EIA took a more pragmatic approach in its evolution. It could be said that it recognised and adapted to the associated political and social contexts. While these themes were identified 15 years ago, they also explain the development of EIA in more recent years. Currently, EIA has become much more than a mean to provide environmental information. With the institutionalised process, EIA is now an instrument in the wider environmental governance and management system.

In the current EIA discourse, more pluralistic views on the goals and objectives of EIA are taken. First, the role of EIA in sustainable development, such as how IA could incorporate the wider goals of sustainable development and whether the integration of the assessments would be more effective in this goal (e.g. Bond, 2015; Tajima and Fischer, 2013). Second, the IA goals were developed under both views of conventional scientific rationality and civil science principles (Cashmore, 2004). However, there is a struggle to position EIA practice and there are constraints in adopting those principles in practices (e.g. Arts *et al.*, 2012; Christensen, Kørnø and Nielsen, 2012). Third, the scope of EIA effectiveness has been expanded to cover emerging issues (Bond and Morrison-Saunders, 2013; Chanchitpricha, Morrison-saunders and Bond, 2019). These discourses and their implication of IA understandings are further discussed in Chapter 2.

### 1.1.3. Public participation in EIA

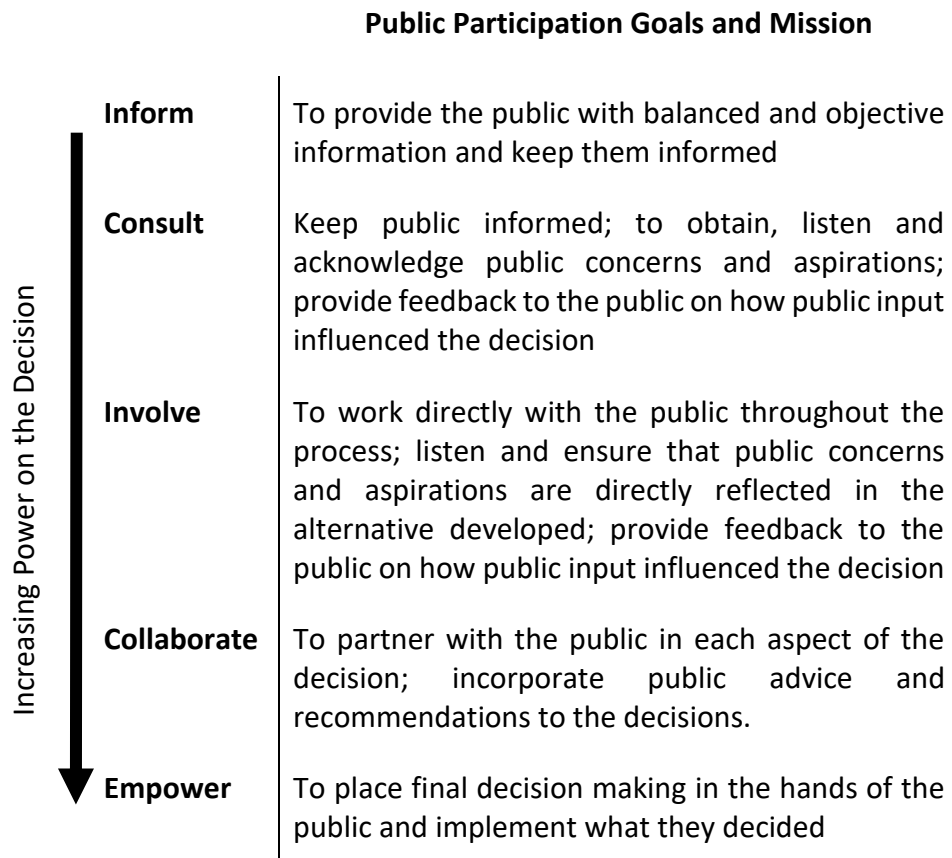
Public participation is one of the subjects that have been discussed and evolved alongside EIA. There was a concern in the 1990s that the decision-making strategies de-emphasised the consideration of affected interest, and as a result, suffered from a lack of popular acceptance (Petts, 1999). The development of public participation in EIA was in line with the wider development of public involvement in environmental decision making, such as UN's Agenda 21 in 1992 (Petts, 1999; Wood, 2003).

Agenda 21 marked the importance of public participation in the pursuance of sustainable development. It stated that the full participation of all parties concerned is required for sustainable development (UN, 1992). Implementation of greater public involvement and participation has been developed since then, which later was reflected in other international regulation, including the Aarhus Convention, and the later updates in the EU EIA and SEA Directives.

While there is a positive trend towards greater consultation and participation in the EIA process (Glasson, Therivel and Chadwick, 2012), it was observed that there is significant variation in the implementation of public consultation and participation in EIA between and within countries with mandatory requirements (Wood, 2003).

Petts (1999) found that while there are many discussions on public participation in the EIA literature, at times, these do not recognise that there are different situations of application, coming with different objectives and potential outcomes. Public participation is a term that covers a wide range of activities. This includes the differentiated the level of empowerment and goals of public participation. The Spectrum of Public Participation is shown in Figure 1.1.





**Figure 1.1 IAP2 Spectrum of Public Participation** (modified from IAP2, 2014)

In conventional practice, the more common description of public participation objectives are “identification”, e.g. identification of concerns (Carroll and Turpin, 2002), assignment of significance to the mitigation of impact, and prevention of environmentally unacceptable development (Wood, 2003). Sadler & McCabe (2002) stated that EIA in practice largely corresponds to consultation; however, different levels and forms may be used in combination at different stages. Despite that, different forms of public participation exist, and there isn’t any evidence in practice that “collaboration” or “empowerment” are attempted through EIA. In other words, the public participation activities are mostly referred to: keep the public informed; obtain, listen and acknowledge public concerns and aspirations; provide feedback to the public on how public input influenced the decision; and, (occasionally) work directly with the public (refers to Figure 1.1. above).

Following the development of EIA, the roles of public participation in IA has also changed among the international discourse, in which there is a pluralistic view about its objectives, among the scientific rationality models and civic science models (Cashmore, 2004). In the growing discourse on environmental governance, public participation is a crucial factor in achieving the desired outcome (Arts *et al.*, 2012). These discourses are discussed further in Chapter 2.

## **1.2. Research Questions**

This PhD research project involves two research questions: “Does public participation contribute to the effectiveness of EIA”, and “How does public participation contribute to the effectiveness of EIA”. In this context, it is argued that only if the practical functions of public participation in EIA effectiveness can be identified and understood, it is possible to evaluate whether public participation contributes to the effectiveness of EIA.

The “effectiveness of EIA” referred to here is associated with achieving its substantive objectives. Conventionally, the substantive objectives of EIA’s focus on protecting the environment through ensuring that impacts are adequately considered in decision-making. However, the research objectives also aim at the development and contemporary discourse on the IA objectives. The original intent of EIA included a desire to address social concerns on the environment and change decision-making in its development. Elements of EIA effectiveness covered in this thesis include “Normative”, “Pluralism”, “Knowledge and Learning” and “Legitimacy” (see Chanchitpricha, Morrison-saunders and Bond, 2019). It is argued that substantive objectives should also include the promotion of sustainable development and making legitimate environmental decisions that reflect social norms and expectations. As such, in this research, public participation is understood to contribute to the effectiveness of EIA through three categories accommodating these emerging parameters (established in Chapter 3): “Procedural Functionality”, “Normative and Legitimacy functions” and “Transformative functions”. The results will be compared with international studies and discourses to answer the research questions. Further details about the logic and settings of the research are explained in Chapter 3.

### 1.3. Overview of Research Design

This PhD research project adopted a qualitative, inductive approach to evaluate the roles and function of public participation in EIA effectiveness. It conducted in-depth empirical cases studies in Hong Kong and evaluate the public participation outcomes. “Public participation” refers to all the activities in the EIA process that fall within the description of any of the spectrum shown in Figure 1.1 above. This means that it includes any activities that aimed to inform, consult or involve the public, regardless of whether those are official activities or part of the statutory requirement.

“Hong Kong’s EIA practices” refer to the whole EIA process under legislative and administrative requirements. It started from the application of the EIA Study Brief to the completion of all Environmental Permit requirements, including monitoring and audit (see Chapter 4 for details). Hong Kong’s EIA practices could be divided into three stages, each with corresponding major public participation opportunities. This is shown in Table 1.1. Both statutory and voluntary public participation activities are included in the empirical studies.

**Table 1.1 Major Stages of Hong Kong’s EIA practice and the Corresponding Public Participation Opportunity**

<b>EIA Stage</b>	<b>Major Public Participation Opportunity</b>
Preparation of the EIA Report	Public inspection of Project Profile, as a statutory requirement under the EIA Ordinance
Review of the EIA Report and Approval	Public inspection of the EIA Report, as a statutory requirement under the EIA Ordinance
Post-EIA Approval	Stakeholder/Community Liaison, as an optional requirement under the Environmental Permit

One EIA case was selected for the study of each of the EIA stages: Tung Chung New Town Extension project was selected for the Preparation of the the EIA report stage, Development of the Integrated Waste Management Facilities Phase 1 project was selected for the Review of the EIA Report and Approval stage, and The Telegraphy Bay Community Liaison Group of the South Island Line (East) project was selected

for the Post-EIA Approval stage. While the EIA process in Hong Kong is standardised, the selected cases showed high engagement of the actors in the EIA practices and involved broader contextual factors.

The key components of this research are an examination of the public participation outcome as in the “Procedural Functionality”, “Normative and Legitimacy” and “Transformative” criteria among the three stages, and then analyse the public participation’s impacts in these. It interpreted the public participation outcome as a product constructed by the actors and contextual factors. The analysis focuses on determining how the outcomes are constructed, affected and how these components benefit and limit the functions in the above categories.

After the analysis, the research would be followed by a critical review of the findings in the light of the international literature and professional discourse to seek insights and advance the international discourse on public participation and EIA effectiveness. The detailed methodology is explained in Chapter 3.

#### **1.4. Rationale and Significance**

Fischer & Noble (2015) noted that there are gaps with regards to the development of a distinct EIA theory. There is also a need for more applied research projects that respond to more immediate problems or challenges faced in practice. The empirical research on public participation will help to fill that knowledge gap.

It is noted that the models of EIA were mostly developed years ago (e.g. Bartlett and Kurian, 1999; Cashmore, 2004). Existing models do not cover many of the expanded IA principles and objectives developed since then. There is limited empirical evidence that backs up such positioning, and the implication of public participation practices are rarely discussed in connection with these models.

The study of public participation in Hong Kong is also beneficial because of the unique social-political contexts. While the discourse of public participation is usually associated with democracy ideology such as deliberation and transformation to environmental governance (e.g. Glucker *et al.*, 2013), there isn’t much empirical information about what this ideology would trigger in non-democratic systems. Hong Kong’s political system is said to be an illiberal

democratic system where elections and public participation practices are common, but where the overall political rights of the citizens are restricted (Zakaria, 1997). Meanwhile, the set up of Hong Kong's EIA system originated in international experiences, and similar principles were adopted (Lam and Brown, 1997). Also, Hong Kong has a highly developed and active civil society (see Chapter 4). This unique context allows testing of the EIA and public participation effectiveness criteria from different angles of views to broaden understanding of context and their implications on IA practices (see Kolhoff, Runhaar and Driessen, 2009).

### **1.5. Structure of this Thesis**

This thesis is divided into eleven chapters, according to the research framework. The focus of each of the chapters are described below:

Chapter 2	Describe the conceptual framework of IA objectives and effectiveness, also evaluate the rationale and positioning of public participation in EIA models
Chapter 3	Describe the research design and explain the methodology of the research.
Chapter 4	Describe the setting and establishment of Hong Kong's EIA system. Also, outline the social-political context of Hong Kong
Chapter 5-7	Present the empirical cases studies on public participation in the EIA, EIA Report Review and Approval Stage and the Post-EIA Approval Stage.
Chapter 8	Evaluate the overall public participation outcomes under the "Procedural Functionality", "Normative and Legitimacy" and "Transformative" criteria
Chapter 9	Analyse the influencing factors that benefit or restrict public participation outcomes

Chapter 10      Discuss the findings based on International experience and  
discourses

Chapter 11      Conclusions

## **2. CONCEPTUAL FRAMEWORK OF IA EFFECTIVENESS AND PUBLIC PARTICIPATION**

After nearly 50 years of development, Impact Assessment (IA) has developed into a cross-disciplinary subject that covers topics among physical and social science. The original intent of IA was to provide decision-makers with indications of the likely environmental consequences of their actions (Wathern, 1988). While this intent is still well recognised, many agendas have been added into the framework. The scope of IA has expanded to take into account the emerging issues of sustainable development; the IA models also developed to have a deeper engagement with social and political realms. In the literature, multiple discourses and evaluation frameworks have been introduced for measuring IA effectiveness. This research focuses on public participation and EIA effectiveness, examining these discourses about the position of IA, the types of IA effectiveness, and then evaluates and discusses the role of public participation in IA effectiveness. This section discusses the contemporary discourse on these subjects.

### **2.1. Theories and Principles of Impact Assessment**

In the early days of development, it had been noted that the development of IA was influenced by various concepts and principles. Caldwell (1988) noted five converging influences: i) rational planning theory; ii) technology assessment, iii) risk assessment; iv) policy goals of the environmental movement; and, v) legislative desire to reinforce administrative accountability. With development over the last four decades, it is noted that there have been changes in the nature and normative basis of IA theories, with increasing diversity in terms of disciplinary inputs, understandings of decision making, and philosophical positioning (Cashmore and Kjørnø, 2013). Although there has been much development in the discourse of IA theories, the discourse during the earlier days is still relevant in examining the core theories and principles. While IA practice today is rooted in the early days and many of the EIA systems in the world are influenced by the National Environmental Policy Act (NEPA) in 1969 (see Wood, 2003), it is inevitable that IA practices are still influenced by these principles. As such, in this section, discourse on the more common disciplines among the international literature over time are examined and

reviewed. It includes the discourse about the philosophic positions of IA, rationality and decision making, environmental governance, and organization behaviour.

### 2.1.1. Philosophic Positions

Philosophical positions refer to the fundamental principles and approaches in IA set up. The early day's establishment of IA represents the ideology of 'technical-rational' model of appraisal (Owens, Rayner and Bina, 2004). According to Caldwell, one of the architects of the NEPA, IA was designed to be "a systematic, focused, interdisciplinary use of science may improve the quality of planning and decision-making" (Caldwell, 1988). This could be said as the summary of its original position during the earlier days of IA. Furthermore, NEPA requires Environmental Impact Statements (EISs) to be prepared for the agencies and be taken into consideration in making decisions<sup>1</sup>. Such a requirement is mostly a procedural provision; however, it constitutes an attempt to influence decisions by changing the rules and premises for arriving at legitimate decisions (Bartlett, 2005). As described by Caldwell and Bartlett, the position of IA was set as an attempt to influence the quality of decisions. There wasn't a clear causal link between the two. Some authors have also suggested that IA, by itself, is more a tool to aid decision making rather than an environmental protection measure (Clark and Herington, 1988; also see Roberts and Roberts, 1984).

The traditional view on IA's positioning has undergone many changes over the years. The rationality in decision making had been a subject since the 1970s. Criticisms of the technical-rational model had been raised on its limitations in reflecting the political decision-making process (e.g. Calvert, 1985; Flyvbjerg, 1998). Some of the observed limitations also apply to IA practices (e.g. Kørnøvn and Thissen, 2000) which led to the critiques of the conventional rational model of IA practise (further elaborated in the following sections). Authors argue for the need to incorporate more 'realistic' political paradigms in IA's theories and practices. For example, argued by Kørnøvn & Thissen (2000), in order to have the intended impact

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<sup>1</sup> See section 2 of the US National Environmental Policy (U.S.C. title 42, chapter 55), available from <https://www.govinfo.gov/content/pkg/USCODE-2011-title42/html/USCODE-2011-title42-chap55.htm>



on decision making, IA approaches should be guided by insights into the nature of decision processes and the ways to influence these processes.

At the same time, the use of sustainable development internationally as a key goal of human development (as expressed in the Brundtland Report in 1987) drove changes in the normative basis for IA theory (Cashmore and Kørnø, 2013). The pursuit of sustainable development brought new agendas to IA, e.g. the application of IA at the level of strategic decision making and the promotion of sustainable development in the end (see Verheem, 1992). With an extended application to Policies, Plans and Programmes (PPPs), it also led to discussions on the approaches and mechanism of IA that contribute to the promotion of sustainable development (Fischer, 2003; Cashmore, Bond and Cobb, 2007).

Furthermore, there have been changes to the wider environmental governance principles, and again the notion of sustainable development has been a prominent driver (Cashmore and Kørnø, 2013). The changing nature of environmental problems also challenged the conventional administrative state in addressing environmental problems. As Dryzek (2013) pointed out, conventional administrative-rationalism emphasise the role of experts, with centralised power and knowledge, the environmental problem to date is more complex and defy such centralisation. As a result, there had been urges to transit from the government to governance in environmental policy making, which is further elaborated in Section 2.1.4.

The core mechanism of IA keeps and follows its original root in providing necessary information and prediction of environmental consequences; however, the above-mentioned challenges and changes moved IA away from its original form of simply a means to ensure informed decisions and developed diverse views on its positions and functions in environmental decision making. Regarding the philosophic positions, multiple models have been developed. For example, Bartlett and Kurian (1999) identified six implicit models on how IA could engage with the political realm and influence decisions; Cashmore (2004) identified two paradigms and five distinct models on the role of science in IA. These models argued that there are different framings of IA and the mechanisms under its umbrella, based on different

assumptions and ideologies. However, it is necessary to point out that these models are not exclusive to each other, but rather reflect the pluralistic nature of views and philosophic believes in the field of today IA practices.

As such, there isn't a distinct philosophic position of practices today. It is noted that the position of IA is ever-changing and contains pluralistic beliefs and views. It keeps the influence of the technical-rational model in the early days while incorporating the emerging models raised in the changing nature of environmental problems and society. The pluralistic nature of IA theories also implies a constructionism interpretation of IA. As Cashmore and Kørnø (2013) concluded, IA could mobilise different conceptions of sustainability, theories could be used reflexively to develop practices that build civil legitimacy over the purposes of IA.

### 2.1.2. Roles in Sustainable Development

Recalling the Rio Declaration on Environment and Development, the core concept of sustainable development is "The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations." (Principle 3 of the Declaration (UNESCO, 1992). Since the introduction of the concept, the goals under its umbrella have been expanding. Currently, there are 17 goals identified by the UN<sup>2</sup>. While promoting sustainable development have been recognized to be the main goal of IA practice, its actual (or practical) meaning in IA is yet to be clearly defined.

On the one hand, sustainable development itself has contested meanings (Bond and Morrison-Saunders, 2013). On the other hand, IA has developed into a wide range of tools. Environmental Impact Assessment (which this thesis is focused on) differentiated itself from sustainability assessment and appraisal tools that took an integrated approach. Therefore, it is necessary to review the stances that EIA take in the promotion of sustainable development.

There are interpretations of the concept of "sustainable development" and "sustainability". A more common discourse in the field of IA is the discourse about

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<sup>2</sup> See UN's website on Sustainable Development Goals:  
<https://sustainabledevelopment.un.org/?menu=1300> (accessed 2 June 2019)

strong and weak sustainability. The key argument on the strong and weak sustainability is that whether the goals of sustainable development (i.e. environmental capital) could be substituted if it could overall enhance the intergeneration and intrageneration quality (e.g. George, 1999; Bond and Morrison-Saunders, 2013). Interpretation of sustainability should be context-specific (Bond and Morrison-Saunders, 2013), and trade-offs may be necessary, such as the concepts of time-limited weak sustainability by George (1999). The differentiation of strong and weak sustainability reflected the complexity of determining the relationship between environmental and other factors in IA practices. George (1999) argued that full testing of a project on sustainable development would require a fuller integration of environmental, social and economic assessment. If environmental factors are to be considered with the social and economic factors at the same time, then what would be the justification for IA to remain subject (e.g. Environmental) focused instead of integrated assessment of sustainability? This argument has been discussed in the academic literature during the last 20 years.

In practice, EIA adopts a different position from sustainability assessment. Referring to Hacking and Guthrie's (2008) "spectrum of sustainable development directed features within the assessment process", sustainability assessment is positioned as an assessment with integrated techniques and themes, strategically focused and comprehensive coverage of sustainable development themes; Conventional EIA is positioned as a separate assessment (and narrowly-focused) on the biophysical environment. While sustainability assessment and conventional EIA take seemingly opposite positions in the spectrum, the core principles they took are not contradictory to each other. Conventional EIA recognized the need to cover wider themes of sustainable development and had broadened the definition of "environment" to other subjects (Hacking and Guthrie, 2008); The framework of sustainability assessment also recognizes the need of ensuring attention to all intertwined factors (e.g. Gibson, 2013). As such, the argument is more about the stances and approaches they take: i) Whether assessment should be done in an integrated approach with strengthened attention on each subject or done

separately with a focused subject and connect each other afterwards; also ii) Whether the impacts should be considered comprehensively or individually for each of the silos.

The more prominent arguments are on the practical outcomes of integration. Empirical experience reveals that sustainability-focused assessment has limited effectiveness in environmental protection. Therivel *et al.* (2009) found that the sustainability appraisal practices in England did not lead to environmentally sustainable plans, as it does not test against the environmental standards or limits, use of input rather than outcome objectives, and lack of quantification and modelling (see also Therivel and Fischer, 2012). Tajima and Fischer (2013) also found that full integration does not necessarily lead to a balanced consideration of environmental, social and economic aspects, with environmental issues mostly considered to a lesser extent than other issues. While scholars argue that sustainability-focused assessment could be legitimate in the long term, development of the tool, in particular on the methodologies and sustainability indicators to ensure appropriate attention to each aspect (i.e. environmental) is needed (e.g. Kidd and Fischer, 2007; Bond and Morrison-Saunders, 2009; Gibson, 2013).

In other words, as of today, the functions of EIA could not be replaced by sustainability-focused assessment, and EIA remains necessary for detailed evaluation and testing of environmental standards on projects. The development of EIA and sustainability assessment may continue to overcome the shortcomings and eventually put sufficient coverage on all sustainable development goals without compromising the effectiveness of safeguarding each of them. It could be said that it is more a two-pronged strategy in the promotion of sustainable development. In light of this, EIA should keep the position as a safeguard to the environmental goals, while seeking to improve coverage of other aspects in respect to the linking with the biophysical environment.

### 2.1.3. Rationality and Decision-making

As described in Section 2.1.1 , rationality is a subject in the core design of IA since the early days. This section further elaborates the key arguments and the implications for IA effectiveness.

The establishment of IA constitutes an attempt to influence and improve decision making through a systematic provision of information (Caldwell, 1988; Bartlett, 2005). The conception behind that is a technical-rational model, which was described as:

*“traditional conceptions of appraisal have assumed a process in which scientific advice, grounded in a positivist epistemology, translates straightforwardly into the substance of policy, and a ‘separation of powers’ is deemed to exist between neutral, authoritative experts and the decisionmakers whom they advise.”*

(Owens, Rayner and Bina, 2004, p.1945)

Owens, Rayner and Bina (2004) summarised a three-ways substantive critique of the technical-rational model of appraisal: i) it fails to provide a convincing account of observed relationships between analysis and policy; ii) it can disguise important ethical and political judgements as technical ones; iii) exposure of these shortcomings may result in loss of legitimacy for appraisal techniques and policies (p.1947). In other words, there are missing links between the causal relationships of technical information and improvement of decision making, in both, theoretical and practical terms.

The questions on rationality also led to questions on two further subjects regarding the evaluation of IA effectiveness. First, what is the value and objective of the provision of information in IA practices? Second, how to address the constraints in decision making and fill the gap in the causal relationship? The six models formulated by Bartlett and Durian (1999) and the five models by Cashmore (2004) sought to identify the potential frameworks to address these questions, which are elaborated one by one here.

To a certain extent, the provision of information could be viewed as a separate objective of IA, with minimal consideration of its influence on the political process or decision making. As in the information processing model identified by Bartlett and Kurian (1999), IA could be viewed primarily as a technique for generating, organising, and communicating information. In this model, the IA process focused on the technical merits, while the decision is taken independent of the IA process. Similarly, among the identified models by Cashmore's (2004), IA could be viewed as in the applied science paradigm, which focuses on the application of scientific knowledge and expertise, such as analytical science or the environmental design aspects. These models do not view consolidating the influence on decision making as part of IA's objective. While it aligns with the discourse in the early days (ie. Focus on informing decision instead of influence decision), its ground had been severely compromised since sustainable development became a prominent agenda in IA practices, as described in Section 2.1.1.

Since the subject of sustainable development has been pushed onto the agenda of IA practice, there have been calls for IA to look at its role in archiving this goal, also the need for IA to push beyond the traditional mandate of science/technical focused approach. As such, it would be necessary to construct the linkage between information and decision making in reality. While the technical-rational model was heavily criticised (e.g. Owens, Rayner and Bina, 2004), it does not completely deny the presence of rationality or impact of information in the decision-making process. It would, however, require a more in-depth examination on the implication of rationality in the field of IA practices and response to the criticisms, such as the three identified by Owens, Rayner and Bina (2004) mentioned above.

There have been developments in the decision theories that sought to refine the models with consideration of actual decision making in political and administration situations. There are three major advancements that have an implication on IA application. First, Simon's (1972) theories of bounded rationality suggested in situations that complexity and uncertainty make global rationality impossible, decision-makers take satisficing approaches rather than optimising approaches. Second, Cohen's Garbage Can Model suggested that organisation decisions are an

operation of the garbage can process that problems, solutions and participants move from one choice opportunity to another. In which, the process is affected by four factors: net energy load; energy distribution; decision structure; and, problem access structure (Cohen, March and Olsen, 1972). Similarly, Kingdon's (1995) discourse on "policy primaeval soup" and "policy window" emphasised that policy windows open when the separated streams of problems, policies and politics are joined. Also, the decision agendas combine the problems, policies and politics streams into a single package. Third, the rounds model emphasised that policies are results from a series of decisions by multiple actors in different time periods. These involved actors will introduce their own perceptions of relevant problems, possible solutions and political judgement. In the decision processes, the choice of decisions in a later period serves as a point of reference for the actors that are present at the time (Teisman, 2000).

The major implication of the above development on decision-making models is a divergence of IA approaches. As pointed out by Kørnøv and Thissen (2000), it has been a dilemma to stick to the original objectives to play an advocate role or to provide assessment and support to the learning and negotiation process of stakeholders and policymakers. However, as IA has advanced its position in promoting sustainable development as its goal (as described in Section 2.1.1), it is then necessary for IA to support learning and negotiation processes in the political realm. It then leads to what practical approaches that IA should take in this stance, which is further discussed in Section 2.1.4.

#### 2.1.4. Political Engagement and Governance

The changes in the philosophic positions and objectives forced IA scholars and practitioners to re-examine the decision-making models IA is built on. It is recognised that it is necessary to engage with the "realistic" political environment, as in order to influence decision making towards its goal of achieving sustainable development. With the decision-making models discussed in Section 2.1.3, there are three streams in decision making and the nature of problems it seeks to address, the associated policies and the wider political factors. EIA would need to connect the three streams to make an effective influence in the process.

As explained in Section 2.1.2, EIA aims at promoting sustainable development and differs from sustainability-focused assessment by focusing on safeguarding the environmental goals while extending its cover on other associated subjects. However, the subjects of environmental issues are broad, having different natures and are ever-changing. The US NEPA (which started EIA) was part of the response to the increased concern and environmental controversies in the 1950s and 1960s, regarding pesticides, oil spills and nuclear fallout (Caldwell, 1988); Nowadays environmental concerns are often large scale. For example, the UNEP identified five emerging issues of environmental concerns: Synthetic Biology, Ecological Connectivity, Permafrost Peatlands, The Nitrogen Fix and Maladaptation to Climate Change (UNEP, 2019). The nature of these environmental concerns is different both in technical and social terms. On the one hand, the environmental controversies in the 1950s and 1960s are chemical pollutions that have identifiable sources; nowadays, environmental concerns are cumulative impacts from human actions and economic activities. On the other hand, environmental concerns involve social constructs. The public would construct environmental problems as social problems, making claims and advocate collective actions, with social perception on environmental risks varying within and among societies (Hannigan, 2006). Different environmental concerns are associated with different social constructs.

With the increasingly complicated nature of today's environmental problems, the conventional administrative measures are no longer sufficient. As commented by Dryzek (2013), the administrative rationalism implies a hierarchy based on expertise, with both power and knowledge centralised at the apex. Problems of any complexity defy such centralisation. Such "crisis" of the administrative rationalism has implication to the function of IA in addressing environmental concerns. Particularly, in the discourse of transition of government to governance. Governance is a relational concept that that *"the totality of interactions in which government, other public bodies, private sector and civil society participate, aimed at solving public challenges or creating public opportunities"* (Meuleman, 2015,



p.5). As contradicted to the top-down approach of 'government', 'governance' is decentralised, informal and networked (Dryzek, 2013).

The discourse of environmental governance has changed the IA practices and the political environment around it. For example, Christensen, Kørnøv & Nielsen (2012) found that many governance trends have emerged within the Danish EIA practice. Dryzek (2013) also commented that the establishment of the Netherlands Environmental Assessment Agency in 2008 as a symbol of the move from government to governance. In practices, it promotes decentralised, polycentric, networked governance, facilitated but not controlled by the central government. Regarding IA practices, governance refers to the discretionary powers among the actors and stakeholders. The potential of such discretionary powers has the potential to improve IA outcome. Involvement allows different organisations to contribute to their local knowledge and expertise (Christensen, Kørnøv and Nielsen, 2012). It also provides the opportunities to dispute conflicts around data collection, data use and value-based conflicts (Meuleman, 2015).

The discourse of transition from government to governance inevitably leads back to the decision models described in Section 2.1.3. With the changes in the IA implementation practice. IA, therefore, leads to a transition to a civic science model that emphasise governance mechanisms. In an environmental governance model, IA must be inclusive, deliberative and participatory; also, it becomes a framework for negotiation and compromise (Cashmore, 2004). In this model, empowerment and deliberation of stakeholders are essential of IA practices. However, the implementation of such model is subject to local political nature and contexts regarding the environmental policy and IA establishments. For example, while governance mechanisms were implemented in Denmark (under EU Directives), different mechanisms extended and narrowed the discretionary power, there is an on-going fight regarding the discretionary power of relevant authorities, and the system is under pressure from a complex group of stakeholders with different ideas (Christensen, Kørnøv and Nielsen, 2012).

The most problematic issue is that with IA's own political nature. It is in a difficult position in the political interface of the governance concept, i.e. the complexity of

integrating IA into existing norms of the establishment while encouraging changes to adopt wider governance. Cashmore *et al.* (2010) identified three fundamentally political characteristics of IA instruments: i) IA instruments are based on a theoretical premise of engendering a change in the values underpinning policy formation and implementation; ii) IA instruments reify particular governance norms; and, iii) IA instruments centrally concern the linked issues of distributional justice. In a scenario that wider governance environment allows, the governance system offer opportunities to strengthening IA systems, and contribute to the wider governance practice with better evidence, transparency and participatory (Meuleman, 2015). However, the local political context may not necessarily support the application of empowerment and the discretion of power. For example, China adopts top-down approaches in environmental management and planning, the advocating of environmental governance are constrained with conflicts with the agencies in the government structure and among other stakeholders. (Cashmore *et al.*, 2010; Bina, 2008). While authors proposed and advocated IA models of governance transition and empowerment to stakeholders (e.g. "knowledge brokerage by Partidario and Sheate, 2013), it is also recognised that such advocacy through scholarly and international institutions contains political sense (Cashmore *et al.*, 2010) and ethical concerns (Richardson and Cashmore, 2011). There does not seem to have a consensus on the balance on advocating the necessary changes to the IA practices (in regards to change to the governance in addressing the emerging environmental issues) while containing the political attempt in changing the wider local political context. Nevertheless, such hidden conflicts would need to be aware and understood in the discussion on the purpose and effectiveness of IA practices.

## **2.2. Types and Frameworks of IA Effectiveness**

There are various interpretations developed on the term “effectiveness” of IA. It refers to different aspects of IA theories and practices. Many of the subjects in the effectiveness discourse are rooted in the core theories and principles of IA concerning the positions and objectives of IA that described in Section 2.1. The three more commonly discussed subjects of IA effectiveness are i) Substantive, ii)

Procedural and iii) transactive (e.g. Sadler, 1996). In the more recent years, other aspects were also added into the IA effectiveness discourse, such as normative, pluralism, knowledge and learning (Bond, Morrison-Saunders and Stoeglehner, 2013) and Legitimacy (Bond *et al.*, 2016). Table 2.1 provides a brief description of each of the aspects of the IA effectiveness discourse.

**Table 2.1 Types of IA effectiveness discourse**

<b>Types</b>	<b>Description</b>
Procedural	Refers to compliance, focus on whether the process conforms to established provisions and principles or how policy is applied in the process (Sadler, 1996; Marsden, 1998; Chanchitpricha and Bond, 2013).
Substantive	Refers to change, focus on whether and the performance of the process in achieving the objectives. (Sadler, 1996; Marsden, 1998; Chanchitpricha and Bond, 2013).
Transactive	Refers to efficiency, focus on the cost, time and other resources invested in the process (Sadler, 1996; Chanchitpricha and Bond, 2013).
Normative	Refers to purpose, focus on whether the policy achieves the normative goals, also whether the policy related to the agreeable sense of principles or acceptable behaviours with the society (Fischer, 2003; Baker and Mclelland, 2003; Chanchitpricha and Bond, 2013).
Pluralism	Consider IA practice to be a learning experience to accommodate pluralism in the assessment process (Bond, Morrison-Saunders and Stoeglehner, 2013).
Knowledge and Learning	Understand how to improve practices, contribute to learning for all stakeholders (Jha-Thakur <i>et al.</i> , 2009; Bond, Morrison-Saunders and Stoeglehner, 2013).
Legitimacy	Encompasses organisational legitimacy and knowledge legitimacy (Chanchitpricha, Morrison-saunders and Bond, 2019), refers to the extent that decisions are acceptable to participants and non-participants (Bond <i>et al.</i> , 2016).

The seven identified types of IA effectiveness focus on different aspects in the IA process. The existing evaluation criteria differentiate the factors and objectives among different IA effectiveness category (e.g. Chanchitpricha and Bond, 2013); however, it is noted that there are overlapping subjects among the discourse of these types. This section examines the discourse of each type of IA effectiveness and explains their contexts, starting from procedural effectiveness. While the substantive effectiveness is the key focus of this thesis, it is put to the last, as it covers many discourses from the other types of IA effectiveness.

### 2.2.1. Procedural Effectiveness

As noted in Table 2.1, procedural effectiveness focus on whether the IAs are carried out, comply and conform to the provisions and principles. Among the literature, discourse about the procedural effectiveness of IA was framed in different ways. While researchers and practitioners adopt various methodology and frameworks in the examination of procedural effectiveness (see Loomis and Dziedzic, 2018), the focuses could be grouped into three categories:

Category 1: Local transposition of international laws or regional policies, which refers to whether the country of concern fulfils its obligation in implementing the ratified international conventions or directives.

Category 2: Local legislation and system design, which refers to whether the local legislation could reflect the key conforming principles of IA.

Category 3: Local enforcement and implementation effectiveness, which refers to whether the IA is (effectively) implemented and carried out under the local legislation and policies

Regarding Category 1, Impact Assessment is introduced or mentioned under various UN conventions, such as the UN Convention on Biological Diversity<sup>3</sup> and

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<sup>3</sup> Full text available at: <https://www.cbd.int/doc/legal/cbd-en.pdf> (Accessed 20 Jul 2019)

the UN Framework Convention on Climate Change <sup>4</sup>. However, these UN conventions do not include obligations on the implementation of IA or contain any details about how IA should be carried out. For example, the UN Convention on Biological Diversity only stated that the contracting parties should introduce EIA to its proposed project as far as possible and as appropriate. The most significant international law and regulation on IA would be the EU EIA and SEA Directives, which require the member states to conduct EIA for a list of activities and state the key principles in conducting them. The analysis on the transposition usually focuses on the interface between the international regulations and local political / administration context (e.g. Lambert and Wood, 1990; Knill and Lenschow, 1998). Category 2 focuses more on the local legislative setting, regardless of the obligation of international law and policy. It concerns the comprehensiveness of the IA system design, which reflect the key principles of international standards and good practices. As discussed in Section 2.1, there is no consensus on what IA should achieve; as such, the international standards here are mostly conceptual principles. For example, the IAIA generalised the principles of EIA in operation, that EIA should be done:

- i) *As early as possible in decision making and throughout the life cycle of the proposed activity;*
- ii) *To all development proposals that may cause potentially significant effects;*
- iii) *To biophysical impacts and relevant socio-economic factors, including health, culture, gender, lifestyle, age, and cumulative effects consistent with the concept and principles of sustainable development;*
- iv) *To provide for the involvement and input of communities and industries affected by a proposal, as well as the interested public;*
- v) *In accordance with internationally agreed measures and activities.*

(IAIA and IEA(UK), 1999)

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<sup>4</sup> Full text available at:  
[https://unfccc.int/files/essential\\_background/background\\_publications\\_htmlpdf/application/pdf/conveng.pdf](https://unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/conveng.pdf) (Accessed 20 Jul 2019)

There are more detailed evaluation criteria developed, such as Wood (2003) and Annandale (2001, modified from Wood's). These criteria examine whether the IA principles are adopted in the system design, including the legislations, policies and administrative initiatives. While there are some shared principles among the criteria, it is usually up to the authors to decide, modify and interpret in the evaluation (Loomis and Dziedzic, 2018; Khosravi, Jha-Thakur and Fischer, 2019).

Category 3 concerns more about the implementation of IA in practice than the system design, on whether the IA system is administered and enforced accordingly. This type of procedural effectiveness is usually examined with the IA system design as Category 2 above, with similar evaluation criteria (e.g. Glasson, Neves and Salvador, 2000). Instead of system design, the key area of concern is the people in the system, including the quality of the technical assessment, the carrying capacity of the authority in administering the process, the enforcement, etc. Since the implementation and administration of IA are heavily associated with the local context, the studies are usually in region to region basis (e.g. Glasson, Neves and Salvador, 2000) or case by case (e.g. Baker and Mclelland, 2003) with empirical evidence.

The three categories are inter-related, forming the complete procedure of IA practice. Most of the frameworks are specified for IA conducted under regulations and policies by the authority. While these procedures are subject to legislation and policy establishments, these establishments are everchanging. The EU EIA and SEA Directives have regular review and amendments<sup>5</sup>, which countries and regions update their local regulations and policies regarding or regardless of the international obligations. As such, the procedural effectiveness is time-specific, which reflect the procedures and practice of a specified time that applies. It is also noted that while International Financial Institutions like World Bank and Asian Development Bank adopt IA as part of their safeguards, it forms a soft obligation to follow the criteria established by these institutions. This mechanism is likely to have an impact to the overall procedural effectiveness to the IA practices of the

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<sup>5</sup> For example, see <https://ec.europa.eu/environment/eia/review.htm>

borrower countries; however, there is limited studies and documents on its implication (e.g. Buntaine, 2011).

### 2.2.2. Transactive Effectiveness

Transactive effectiveness is one of the commonly mentioned types of IA effectiveness that refers to the time, cost and other resources efficiency in IA process (Sadler, 1996; Chanchitpricha and Bond, 2013). While it is commonly mentioned, there are no detailed criteria for measuring this type of effectiveness.

Theophilou, Bond & Cashmore (2010) identified four criteria:

- i) Whether IA was carried out within a reasonable time frame*
- ii) Whether IA entail excessive spending*
- iii) Whether acquiring of skills and personnel required for the IA are easily accessible and not constitute a big burden*
- iv) Whether roles and responsibilities are clearly defined and allocated*

The above four criteria are more general principles for reference as the terms are more 'relative' instead of 'absolute', especially for the first three criteria. Although Theophilou, Bond & Cashmore (2010) noted those "as compared to old ex-ante mechanism", there is still a lack of reference point for comparison, as the scope and nature of each study would not be the same. Among the literature, studies tend to use a more qualitative approach in analysing the transactive effectiveness of IA practices, which analyse the time and cost management perspectives during the specified IA process (e.g. Baker and Mclelland, 2003; Pope *et al.*, 2018). The lack of standard of time and cost involved in the IA process makes it difficult to have a systematic examination of transactive effectiveness.

Besides the definition, the evaluation of transactive effectiveness also shows to be problematic. In Pope *et al.*'s (2018) case study on SEA of proposed LNG Precinct in Western Australia, it is noted that the site selection process was transactive effective but the SEA was not. It attracted controversy and legal challenges, which also undermined the procedural and substantive effectiveness. Similar, in the review of Sustainability Assessment In UK by Thérivel (2013), it is noted that the economic recession and concomitant reduction in the local government funding

caused local authorities to carry-out more sustainability appraisal in-house, with minimal or no additional resources, which would increase the transactive effectiveness while reducing the other forms of effectiveness.

Although transactive effectiveness is commonly mentioned in IA effectiveness discourses and studies, the analytical framework is still underdeveloped. It would require further standard and references for systematic evaluation on the cost, time, skill and personal management in the IA process. Also, it would require justification and positioning in light of the potential adverse impact on other forms of IA effectiveness.

### 2.2.3. Normative Effectiveness

Normative effectiveness refers to achieving and representing the 'norms' of IA policy and practice. When it was added by Baker and McLelland (2003), they referred it as the purpose aspect of the policy, about what ideal it purports and what it intends to achieve. The scope of it was expanded later, which cover the society (and community) acceptance of that policy and practice (e.g. Chanchitpricha and Bond, 2013). As such, it could be divided into two parts: the intended goals of IA policy; and, the acceptable means from the point of the public.

While the goals of IA were thoroughly discussed in Section 2.1, the normative effectiveness discourse is; however, focus more on the goals of the IA policy instead of the tool itself, which does not necessarily reflect the whole ideology contained in the tool. For example, in the UK, the purpose of EIA was described as to protect the environment by giving the local planning authority full knowledge of the likely significant effects and takes this into account in decision making, also ensure that the public are given early and effective opportunities to participate in the decision-making procedures (Ministry of Housing and Communities & Local Government, 2019). This description does not contain many of the later discourse of IA ideology, such as the promotion of wider sustainable development. It shows that the IA policy is subject to the regional and local context.

Moreover, the goal of the policy usually contains conceptual phases that are difficult to measure and differentiate from other forms of IA effectiveness. With



the above example of the UK's EIA policy goals, the goal is to protect the environment, but the policy does not describe the extent of 'protect' it should give. Giving the local planning authority full knowledge, taken into decision making, early and effective public participation are policy objectives that tend more on the procedural and substantive aspects of IA effectiveness. When normative effectiveness first mentioned in Baker & McClelland's (2003) study, the overall policy effectiveness was evaluated by the combination of procedural, substantive and transactive effectiveness. This approach, however, still leaves questions about how well the policy goals cover the criteria used in other forms of IA effectiveness.

The normative effectiveness of IA was later expanded to cover the norms of society. In this discourse, the main factor influencing the normative effectiveness would be whether and how the IA implementation aligns with or reflect the contexts, such as culture, individual expectation, policy, practice and existing condition (Chanchitpricha and Bond, 2013; Bond and Morrison-Saunders, 2013). Chanchitpricha & Bond (2013) explained that normative effectiveness could be evaluated through determining lessons learned and incremental changes among stakeholders and improvement of environmental quality and health and social equality. The political context is also a determining factor in normative effectiveness. As discussed in their paper (referred to as democratic effectiveness), whether political decision-makers make the 'right' decisions and choose the means to fulfil the political environmental objectives is a norm in democracy theory and thus should be incorporated into the consideration of IA effectiveness. Although the scope of normative effectiveness had been expanded, there is still no systematic evaluation on the normative effectiveness of IA. The lack of common norms about IA (e.g. goals and political beliefs on how IA should be conducted as discussed in Section 2.1) and measurable criteria, it remains difficult to have detailed evaluation on this subject. Regarding the position, it also has potential conflicts with the discourse on pluralism (see below section). While the arguments in the discourse should be considered, it requires further conceptual development on the evaluation framework. Some of the ideas of the normative effectiveness were absorbed and reframed as Legitimacy discussed in Section 2.2.6.

#### 2.2.4. Pluralism

Pluralism is a relatively new aspect in the discourse of IA effectiveness. It refers to whether the assessment process could accommodate pluralism (Bond, Morrison-Saunders and Stoeglehner, 2013). In the IA context, pluralism includes two aspects: the plurality of theoretical perspectives; and, the plurality of stakeholders with their implications of constructionism (Cashmore and Kørnø, 2013). As described and discussed in Section 2.1, the IA theories and developments have embedded high level of pluralistic interpretation regarding the philosophic positions, goals and models of implementation. As such, there are varied expectations among the stakeholders in the IA process. In the light of constructivist beliefs, Cashmore & Kørnø (2013) suggested that it altered the theory-practice nexus. In a comparison of the perception that practical recommendation could be derived straightforwardly from theories, there is an alternative conception that the theories to be used reflexively to develop practices that build civil legitimacy over the uses of IA.

While it is recognised that pluralism present as a nature of nowadays academia and society, the conceptual link between pluralism and IA effectiveness is underdeveloped, especially the meaning of “effectiveness” itself is subjected to pluralistic views (Bond and Morrison-Saunders, 2013). In the discourse of accommodating pluralism in IA process, the two common phases mentioned are deliberation and learning. Deliberation refers to deliberative democratic approaches, it contains three elements: representativeness, deliberativeness and influence (Pope, 2013). Putting those in IA practices, it considers whether the IA process would engage stakeholders with different backgrounds, empower them in the process, resolve conflicts and make mutually acceptable decisions (e.g. Morrison-Saunders and Retief, 2012; Pope, 2013).

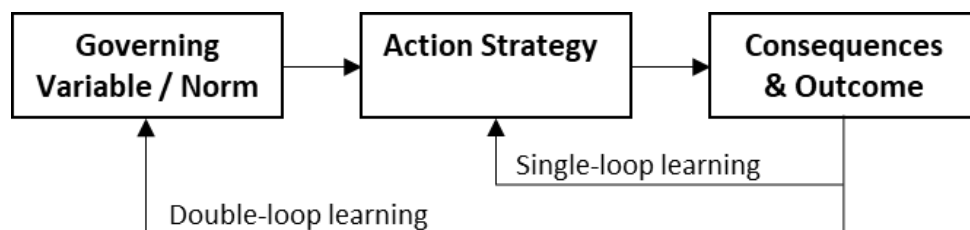
Some authors suggested that IA practice should be considered to be a learning experience to the accommodation of different views of the goals, knowledge and models of IA (e.g. Bond and Morrison-Saunders, 2013; Pope, 2013). While the aspect of knowledge and learning would be more detailedly discuss in Section 2.2.5, the learning in regards to accommodating pluralism is rather conceptual. With the

pluralistic nature of IA theories and interpretations, there are two directions of outcomes: forming a mutually agreeable norm (refers to the normative effectiveness in Section 2.2.3); or, embracing the pluralist nature and accept the products of a social construct as they are. This concept is rarely discussed in the literature.

#### 2.2.5. Knowledge and Learning

It is suggested that an effective IA should contribute to understanding how to improve practices and learning for all stakeholders (Bond, Morrison-Saunders and Stoeglehner, 2013). While learning is regarded as a mean to accommodate the pluralism aspects among the society and in the IA process (as mentioned in Section 2.2.4), it is only part of the knowledge and learning discourse in IA practices, under the blanket of “Transformative learning”.

Transformative learning in the IA context refers to its longer-term role in transforming individual, professional and organisational norms and practices in support of sustainable development, through facilitating collaborative learning within both the organisations and the wider society (Jha-Thakur *et al.*, 2009). The discourse of transformative learning commonly references the theory of “single-loop learning” and “double-loop learning”. Single-loop learning refers to learning like techniques in handling an action, or maintaining the field of constancy; double-loop learning refers to learning like learn to concern the resolution of the problem or change the field of constancy (Argyris and Schön, 1974). The theory is illustrated in Figure 2.1.



**Figure 2.1 Single and Double-loop learning**

(modified from Fischer, 2009; originally by Argyris and Schön, 1974)

The single-loop learning in IA has been identified since the earlier days, which there was a learning process that practitioners learn to utilize and implement the EIA

requirements after the introduction of NEPA (Caldwell, 1988). Later studies also found that since EIA practices involve handling and managing data and knowledge, different actors could have technical and scientific learning outcomes by involving the EIA process/ practice, i.e. Methods in collecting and processing data and gaining knowledge of the local environment (Cashmore, Bond and Cobb, 2007).

The implication of double-loop learning is; however, more sceptical. In both of the studies by Jha-Thakur *et al.* (2009) and Cashmore, Bond & Cobb (2007), it was found that changes in values and norms among the stakeholders were only observed in some of the cases. Both studies highlighted the practical context as a crucial factor in influencing the potential of this type of second-loop learning. Jha-Thakur *et al* (2009) noted that the collaboration with external parties and the interactions among would facilitate and favours the transformation on attitudes, values and routines; Cashmore, Bond & Cobb (2007) found that the individuals' experience from the public participation process changed the perceptions and attitudes of some stakeholders.

Sinclair, Diduck & Fitzpatrick (2008) found that there is a linkage among education, participation and learning outcomes, suggesting the learning outcomes would depend on the form and level of participation, which transformative learning outcome would require methods that promote interaction and dialogues among participants. In Sinclair & Diduck's (2017) later work, it is also suggested that civic approach and deliberative decision-making process should be implemented. They argued that to facilitate transitive learning outcomes, participation program should be designed with active, early participation while ensuring participants have shared commitment to mutual understanding and responsibility to make a contribution.

Nevertheless, it shows that it would require context beyond the IA framework to facilitate second-loop or transformative learning. The causation theory between IA and second-loop learning outcomes is still underdeveloped. While active interaction and dialogues are identified as crucial components, such mechanisms are not included in the conventional IA designs. Also, it is subjected to the overall discourse on IA positioning and objective (as in Section 2.1).

### 2.2.6. Legitimacy

Legitimacy encompasses organisational legitimacy and knowledge legitimacy, focusing on whether the IA process perceived to be legitimate by a wide range of stakeholders (Chanchitpricha, Morrison-saunders and Bond, 2019). Chanchitpricha, Morrison-saunders & Bond (2019) identified six criteria:

- i) Openness, transparent and equity,*
- ii) Distribution of power and responsibility,*
- iii) Knowledge and accuracy,*
- iv) Knowledge integration,*
- v) Knowledge diffusion; and,*
- vi) Knowledge spectrum*

In this discourse, it is argued that legitimacy of IA depends on the timing of decision information, the behaviour type exhibited by the decision-maker and the level of public engagement (Bond *et al.*, 2016). The legitimacy discourse is deeply related to the political science of decision making. It absorbed some of the discourse of normative effectiveness, pluralism and knowledge and learning. However, this effectiveness category is still new and underdeveloped. On the one hand, there isn't sufficient empirical study that could verify how the public's perception on IA would be affected by these criteria (also if the political culture and context would affect such perception in a whole), the casual linkage on these aspects and IA practice have yet to be fully understood. On the other hand, some of the criteria seemingly difficult to put into actual IA evaluation. For example, as Chanchitpricha, Morrison-saunders & Bond (2019) mentioned, knowledge legitimacy may be affected by premeditated acts that are difficult to identify. Nevertheless, the legitimacy discourse suggested a new angle on view in evaluating IA system and practice.

### 2.2.7. Substantive Effectiveness

Substantive effectiveness refers to whether IA could achieve its goals (Sadler, 1996). It is one of the older and more commonly mentioned IA effectiveness types. There are many evaluation criteria covered the aspects of substantive effectiveness, for

example, the evaluation criteria by Wood (2003) and Annandale (2001). However, it must be noted that the evaluation criteria developed in the earlier day would not be able to cover many of the issues that arise in the recent years of IA discourse. As thoughtfully discussed in Section 2.1, the goals of IA have been changed throughout the years, with new agendas added into the ideology and framework of IA. The original intent of IA was to protect the public and environment through informed policies and decisions (e.g. Caldwell, 1988), and now it takes on the wider social and political goals of promoting sustainable development. As such, it is necessary to accommodate nowadays substantive goals into the discourse and evaluation of IA substantive effectiveness.

There are pluralistic beliefs and interpretations of IA goals. New and variation of IA tools emerged over the years would have their corresponding meaning of substantive effectiveness. It would hereby adopt the conceptual framing of EIA and SEA (as “Environmentally focused” IA) that primarily focused on safeguarding the environment while taking on the associated social, economic and political principles towards sustainable development, as explained in Section 2.1.2. This section reviews the evaluation criteria of the key identified substantive goals one by one: i) Systematic consideration of environmental information; ii) promote transformative change to the decision-making process; and, iii) promote changes to norms and values

### *Systematic consideration of Environmental Information*

The original intent of establishing EIA was to introduce a process that would ensure decision-makers were informed with the environmental impacts. The primary function of EIA was to provide necessary information for consideration during the decision-making process, also ensuring that the information was considered by the decision-maker. This function has been covered in most of the IA evaluation criteria (e.g. Sadler, 1996) and remains as one of the most essential criteria in the substantive effectiveness of EIA and SEA. EIA is implemented as process that usually comprised of four stages: Preparation stage, Assessment stage, Approval stage and follow up stage (Glasson, Therivel and Chadwick, 2012). Through these

stages, EIA provides information, including environmental baseline, identification & evaluation of different options, determination of impact significance, formulation of recommendation, etc (Fischer, 2009). In this sub-category of substantive effectiveness, the key evaluation criteria usually refer to whether the EIA provided quality information, whether it identified appropriate alternatives and mitigation measure, whether the recommendations are incorporated into the project; and whether the EIA influenced decisions (Sadler, 1996; Pope *et al.*, 2018; Chanchitpricha, Morrison-saunders and Bond, 2019).

While it is relatively straightforward to evaluate the quality of assessment and the recommendation proposed, there is no direct measurement on how the project and decisions are influenced by the EIA. Some authors and established evaluation criteria extended to use the procedural mechanism as a mean to evaluate such influence, e.g. early start, close collaboration and parallel development (Chanchitpricha, Morrison-saunders and Bond, 2019). The values and benefits of the early start, close collaboration and parallel development process are argued to benefit EIA effectiveness in several ways. For example, (Morrison-Saunders & Bailey (2009) argued that collaboration between regulator and consultants provide mutual understanding and clarification on the values and expectations. Uttam, Faith-ElI & Balfors (2012) argued that integrating and coordinating project planning and EIA would facilitate the exchange of information and strengthen the EIA by incorporating EIA follow-ups into the procurement contract. While these mechanisms are agued to support the quality assurance of information, information flows among the parties and incorporate the information to the project and decision, there is limited empirical evidence to show the extent of influence on EIA effectiveness in the process. Moreover, as discussed in Session 2.1.3, having systematic means to consider environmental information would not necessarily lead to better decisions. As such, the substantive effectiveness of EIA would require additional means to influence the political context.

*Promote transformative changes to the decision-making process*

Changes to the process, policies and legislation are part of the indirect and incremental substantive outcomes (Pope *et al.*, 2018). Impact assessment embedded political agendas in its design, as its introduction was a political response to the environmental controversies in the 1950s and 1960s (Caldwell, 1988, also see Section 2.1.4). It also constitutes an attempt to influence decisions by changing the rules and premises for arriving at legitimate decisions (Bartlett, 2005, also see Section 2.2.1). With increased discussion on the political aspects of IA practice (see Section 2.1.3 and 2.1.4), some of these aspects are reflected in the discourse of IA effectiveness.

Substantive effectiveness refers to achieving its goals. There are two aspects identified in the political realm of IA: i) The political goals embedded in the IA; and, ii) The necessary transformative changes to achieve the environmental and political goals. Since the introduction of NEPA, IA has commonly been implemented through legislation (e.g. see Glasson, Therivel and Chadwick, 2012). As described by Bartlett (2005), the NEPA attempted to change the rules and premises for arriving at legitimate decisions, and it was an exercise in the institutionalisation of rationality in government organisations. However, the implementation of IA did not follow a precise political model. While Bartlett & Kurian (1999) identified six political models of how IA could work, it was noted that the political agendas could be interpreted and framed in various views, with different forms of political goals. Although there has yet a norm on the policy model that IA should adopt, the development of IA throughout the year have undergone many changes in its political context. In which, the increased endorsement and implementation of public participation in the IA brought the democracy and governance discourse into IA's political models.

The democracy discourse in IA contains both ideology and pragmatic means. On the one hand, public participation is recognised as a principle that it is only ethical and democratic to involve the public in decision making; On the other hand, it is also a democratic practice that public participation is a necessary mean to protect their right and exercise their duty in environmental protection (O'Faircheallaigh,



2010). The Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (i.e. The Aarhus Convention) seeks to strengthen three pillars of principles in the IA: access to environmental information, access to justice in environmental matters and public participation. It requires substantial changes to the legislation and policy changes to IA (Hartley and Wood, 2005). With these principles been transposed and reflected in the IA system (among the obligated countries and regions), these principles have been part of the substantive goals of IA.

The discourse on environmental governance is explained in Section 2.1.4. It echoes with the democracy principles on deliberation and empowerment, while also recognised the need for such changes in the system for tackling the more complicated environmental challenges and wider political environment changes in the recent years. Although some countries have implemented principles of governance into IA practice, it is yet a norm of IA's goal, with other models still shared portions of supports (see Section 2.1.4). Instead of arguing that achieving environmental governance is a substantive goal of IA, it would be more appropriate to argue that IA embedded a substantive goal to facilitate the transformation of the environmental decision-making system. Just as the intent of NEPA to introduce rationality into environmental decision making, principles of governance, i.e. deliberation and empowerment is a demanded change to the decision making.

The goal to facilitate transformative changes to decision making align with the discourse in normative effectiveness, pluralism, knowledge and learning; and legitimacy. It is necessary to transform the decision-making system to fit the changes in the wider political and social context, which would be the only way that a legitimate decision could be made.

#### *Promote changes to norms and values*

Capacity building, raising awareness, learning, and gradual shifts in societal values and norms are indirect or incremental substantive outcomes of IA (Pope *et al.*, 2018). However, the substantive goals of such learning and shifts in societal value and norms are rarely discussed in detail among literature. In the early days, the setting of NEPA aimed to promote the norm of ecological rationality, by

introducing a process to consider environmental information before making decisions (Bartlett, 2005). The ideology in IA have changed throughout the years, it moved from focusing on the physical environment to cover the broader issues on sustainable development, realising the needs to address the intertwined factors among the environment, society and economic (see Section 2.1.2). It reflects the very nature of shifts of values and norms. Referring to the double-loop learning (described in in Section 2.2.5), the norms should not be taken as given, but a variables that subject to change in the learning process. The notion here is more about contributing of the changes to values and norms, instead of preset goals of changes.

While the subjects of changes to norm and values are rarely discussed in the literature, there are two observed problems and gaps in the framework. The first problem is EIA's missing logical connection with the broadened scope on sustainable development ideologies; the second problem is the lack of interface about changing societal norms and values. As described by Bartlett (2005), the logic behind the design of the NEPA was to introduce ecological rationality to decision making. EIA now contains the agendas of sustainable development that many of the goals nowadays are beyond the physical environment. Although EIA differentiated itself with sustainable development by focusing on the detailed assessment of the environment, EIA would still require an update of the logic to facilitate changes to the norms based on nowadays ideology. For example, while equity is the core discipline of sustainable development, it would require EIA to examine the outcome distribution and environmental justice. However, it could not be addressed by a technical process, but inevitable involve normative politics (Walker, 2010).

Changing societal norms and values is a double-loop learning process, many of the discourse on knowledge and learning sub-category of IA effectiveness in Section 2.2.5 are applicable to this discourse. However, most of the discourse in knowledge and learning focused on the learning among practitioners, with few on social learning. Social learning contains two major components: cognitive enhancement and moral development, the latter one refers to individuals able to make

judgements of right or wrong (Webler, Kastenholz and Renn, 1995). The changing of societal norms and values are closely related to such moral development. Webler, Kastenholz & Renn (1995) found the moral development would be facilitated by offering people opportunities to work together with their peers to solve a common problem. As such, it includes a process of deliberation. The outcome of deliberation and learning relies on public involvement design (Diduck *et al.*, 2012; Sinclair and Diduck, 2017). It is recognized that changes to the approaches in public involvement would be required to facilitate such learning and changes to societal norms and values (Sinclair and Diduck, 2017); however, whether or when such changes would be commonly implemented is uncertain. Moreover, it is noted that while the ideology of deliberation aligns with the ideology of environmental governance, it has not been well implemented in the IA process, or been developed to be a common norm in IA practice (similar to the discussion of transformative change to the decision-making process above).

### **2.3. The Role of Public Participation in the EIA**

Public participation is recognized as a crucial component in IA practice. The benefits of public participation have also been clearly described in both theoretical and practical term (Stewart and Sinclair, 2007). While public participation has appeared in many of the discourse on IA theories and effectiveness above, this section re-examines the roles of public participation among the discourses and summaries the core principles.

#### **2.3.1. Positions of Public Participation in IA Practice**

Public participation has been regarded as a component of IA since the very beginning. With the changes in ideologies and models of IA as a while (see Section 2.1), the position of public participation in IA practices also changes accordingly. There are three more commonly identified positions among the literature:

- i) Regarding public participation itself as an intrinsic right and value in a democratic society;*
- ii) Technical functions in the Scientific rationality models; and,*
- iii) Social-political functions in civic science and governance models.*

The first position of public participation is closely related to the democracy discourse both within IA (described in Section 2.2.7) and outside of IA. It is currently recognised that it is a human right of all people to be fully involved in and to influence public decision-making processes that affect them (UN Human Rights Council, 2015). It is a type of citizenship norm that engaged citizen desire and willing to participate directly in general political activities and on decisions affecting one's life (Dalton, 2008). Furthermore, the right to participate in decision-making is an extended principle to the right to live in an adequate environment as in the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (i.e. The Aarhus Convention). In this position, IA should reflect or endorse the exercise of these recognised human right in the implementation (Vanclay, 2003; Hartley and Wood, 2005; Morrison-Saunders and Early, 2008).

The second and third positions recognise the functions and benefits of conducting public participation in IA practice. These functions and benefits would have different weighting and functions among the political model and model of science in IA. For example, among the six political models identified by Bartlett and Kurian (1999) public participation only play a role of an information source in the information processing model; but will play a component of the democratic process in the pluralist politics model. Similarly, in the applied and civic science models of IA, Cashmore (2004) remarked that the perceived need for public participation varies among the models, subject to the belief in democratising democracy or deliberative democracy, and the need to embrace the plurality of societal priorities and values. As such, there is a pluralistic interpretation of the functionality of public participation in IA practice. Nevertheless, Section 2.3.2 explains the key functions of public participation observed and argued in the literature.

### 2.3.2. Functions of Public Participation

As mentioned in Section 2.3.1, public participation has technical and political functions in IA practice, despite that these functions would have a different

weighting in different models. Hereby set aside the weighting and explain these functions.

### *Technical Functions*

The technical functions of public participation focused mainly on the provision and processing of information. The information referred here includes information about the physical environment and the perceptions about the impacts. Sheate (1996, p.88) identified that public members play a crucial role in the scrutiny of the EIA process and its documentation, which they are able to offer a critical analysis of documentation; local expertise; alert to issues pre- and post-development; involve in their own monitoring program; and, legal challenges. In addition to the scientific data, it is also identified that the public can provide decision-makers with the experimental and value-based knowledge, as specific professionals engaged by project proponents and their consultants may adopt different views, epistemologies and values from the people being affected, public or other members would have other interpretation of the impacts. (O'Faircheallaigh, 2010; Glucker *et al.*, 2013). In this discourse, it is argued that the public could enhance the quality of the information in the assessment and conduct quality assurance in the process. It is viewed that public participation is a mean to ensure that all decision-makers can make the most informed and well-considered decision (O'Faircheallaigh, 2010).

### *Social-Political Functions*

Public participation in environmental assessment brings ethical and aesthetic dimensions into assessments (Elling, 2011). The political functions of public participation are associated with the discourse democracy practice in IA, it covers the benefit of the political outcome and the environmental outcomes through political means. Public participation allows the public to engage in the environmental governance and influencing decision-making in the process, it served as a political arena of pluralism and representation, that various interest would seek influence to decisions in the process (O'Faircheallaigh, 2010). This process has several potential benefits. First, the process itself could be viewed as fulfilling the political or democratic norm for involving the affected individual in the

process (Glucker *et al.*, 2013). Second, the public participation process opens up the decision-making process, allowing redistribution shift of the balance of power. This redistribution of power would help to empower the marginalised and powerless groups (O'Faircheallaigh, 2010), also help in the pursue of higher political goals such as fairness and natural justice (Morrison-Saunders and Early, 2008).

Regarding the outcome of the public participation and the subsequent deliberation, there are five social-political goals: Inform and educate the public; Incorporate public values into decision-making; Increase the substantive quality of decisions; Foster trust in institutions; and, Reduce conflict among stakeholders (Beierle, 1999). It is commonly observed that that public participation in IA practice does lead to public education and social learning outcome (e.g. Webler, Kastenholz and Renn, 1995), this perspective also extends to the knowledge exchange and mutual learning among practitioners and stakeholders (Jha-Thakur *et al.*, 2009).

However, there are disputes on its capability in achieving other goals. There were cases that public participation in IA was able to foster trust, reduce conflict, address public demands and enhance decisions, but the outcomes vary cases by cases, affected by the arrangement and context of the society in the specific cases (Webler, Kastenholz and Renn, 1995; Del Furia and Wallace-Jones, 2000; Baker and Mclelland, 2003; Nadeem and Fischer, 2011). The empirical cases studies show that public participation is important but would not be sufficient to deliver the social-political goals by itself.

Del Furia & Jones (2000) and Nadeem & Fischer (2011) argued that it requires suitable institutional arrangements to ensure open, transparent, accessible involvement in appropriate time. Some other authors argued that it would require substantial changes to the IA process and practice to address the notion and contest of rationality in decision making. For example, Richardson (2005) suggested that practitioners and planner need facing up to power, have critical understanding and make ethical judgements, as IA should be used to articulate legitimate and honest stories about development and sustainability. Elling (2011) argued that if public involvement is taken seriously and aim to have an effect on

decision-making, the planning process would need to change to have dialogues between all parties involved, and IA will be integrated to that process. These discourses align with the overall discourse on the position and principles of IA (see Section 2.1), which there is no common norm on the approaches IA should take.

### 2.3.3. Public Participation and EIA Effectiveness

The above-explained positions and functions of public participation contribute to the IA effectiveness, which are also mentioned in the discourse among the effectiveness types. Public participation played roles and benefits to most of the effectiveness types, probably except the Transactive Effectiveness, which the public participation does not embed objectives to save transactive cost or time. Referring to Procedural effectiveness, public participation is commonly implemented as part of the IA requirement and as a principle of good practice. Therefore, conducting public participation (effectively) directly affect the procedural effectiveness of IA. In addition to that, the technical functions of public participation also directly benefit the objectives in assessing and considering all biophysical impacts and relevant socio-economic factors. For normative effectiveness, the political and social context is part of the norm that IA should follow. Public participation is like a mirror that reflects such context, in how should the public be involved, and how should the public able to influence the decision-making process. For pluralism, knowledge & learning and legitimacy discourse, public participation is to act as the key mechanics to enable the pursuit of these types of effectiveness. In these discourse, public participation represents the ideology of democratic practice, and the social-political functions are viewed as a crucial component for promoting openness, a transparent process, pluralistic representation, knowledge exchange and mutual learning.

Substantive effectiveness and public participation have a more complicated relationship and affect each other in several ways. For the goals of systematic consideration of environmental information, the technical functions benefit the generation and quality assurance of the information provided in the process. However, the capability of influencing decision-making is in question. As public participation practice, subject to its own limitation, is important but insufficient for

influencing decision-making. In the discourse of promoting transformative change to decision-making process, also the changes to norms and values, the public has its share in building the norm, values and decision-making process. The input from the public participation practice, in theory, should provide feedback and become a driver of change. With pluralistic interpretation on the role of IA and the public participation in the process, many of these conceptual aspects are currently underdeveloped in the IA theory. It is also uncertain what direction it would lead to.

#### **2.4. Summary**

This chapter illustrated the development in core theories and principles of Impact assessment through time, examined the types of IA effectiveness and reviewed the role public participation played in IA effectiveness. The theories and models of IA have been developed way beyond its original intent as a mean to provide environmental information for decision-making. The subjects covered by IA have extended to the wider goals of sustainable development. With realizing the complexity of sustainability problems faced today and the reality of political decision-making, there are demands to open up the decision-making process to allow external experts and the public to participate. In light of these demands, IA models have been developed to incorporate the politic and public policy agendas.

There are seven types of IA effectiveness identified in the literature. Many discourses among these types of IA effectiveness have overlapping issues. In general, an effective IA practice should follow the international standards, ensure environmental impacts are considered in the decision-making, reflect the social-political context, and promote transformative changes to the political and social realm in the direction to sustainable development. Public participation plays crucial roles in IA effectiveness. The public participation itself has an intrinsic value that it is a demand in the democratic practice. It also has technical and social-political functions that benefit IA effectiveness. However, it is also noted that public participation itself is not sufficient to drive transformative changes to the process or the social norms. This research would take on the discourse in the



literature and examine the roles and functions of public participation in IA effectiveness. Chapter 3 provides details on the research design and methodology.

### **3. METHODOLOGY**

This chapter explains the research design adopted in this PhD research. It starts by illustrating the rationale and logic behind the research question and then outlines the scope of the study. Thereafter, the research approach and the methodology used in the empirical case studies are described. Lastly, the criteria used for evaluating the contribution of public participation in IA effectiveness are explained.

#### **3.1. Introduction**

This PhD research seeks to facilitating the development and advancement of IA theories. When starting the research, different methodological approaches were first considered. When considering whether the study should focus on one EIA system or multiple EIA systems, it was decided that focusing on one EIA system would facilitate a deeper investigation into the selected system and would allow a more comprehensive analysis of the findings. Having decided to focus on only one EIA system, it was then necessary to decide which EIA system to consider. One of the key factors was practical feasibility. This included a consideration of whether there would be sufficient available information, as well as whether or not the researcher had the capability to understand of the system. As the research was conducted at a UK university and the researcher is from Hong Kong, it was decided that EIA practice in either the UK or Hong Kong would be apposite.

Web-based surveys (Google Scholar, ScienceDirect) and a review of wider literature concluded that there was an abundance of EIA studies in the UK, from academic journal publications to PhD and Master's level dissertations, and that they covered different aspects of EIA practice (as reported by Fischer, Jha-Thakur and Hayes, 2015) . However, there were only a limited number of academic journal publications on Hong Kong's EIA. In addition, these were mostly dated (e.g. Marsden, 2010; Lam and Brown, 1997). There are a fair number of conference proceedings (such as annual IAIA conferences, and a regional symposium in 2014) available, but most of the observations reported in these proceedings have yet to be published in any refereed journals.

Public participation is deeply rooted in the democratic principles of good governance, empowerment, and deliberation (Glucker *et al.*, 2013). As explained in Chapter 4, the political system in Hong Kong is viewed as an illiberal democracy. Whilst elections and public participation are commonly practiced and civil society in Hong Kong is highly developed and active, the overall political power of citizens is restricted, especially with regard to the election of the Chief Executive and the appointment of high government officials. Meanwhile, the set up Hong Kong's EIA system is based on international practice; it has adopted similar principles and intents with regard to opening up decision making and allowing public participation (Lam and Brown, 1997). The unique political context provides opportunities to look at public participation from a different perspective and to reflect on the implications of the specific social-political context for public participation outcomes.

### 3.2. Research Questions

The subject of this research is “*Whether and how public participation contributes to the effectiveness of EIA*”. ‘Whether’ refers to the validity of the statement that public participation practices contribute to the effectiveness of EIA, as suggested in the literature (see Section 2.3). ‘How’ refers to the causal relationship between public participation practices and the improvement of EIA effectiveness. As such, it developed into two research questions:

- i) *Does public participation make EIA more effective?*
- ii) *How does public participation make EIA more effective?*

The two research questions recalled the discourse on public participation and EIA effectiveness as explained in Chapter 2, engaging the types of EIA effectiveness, as well as the identified technical and social-political functions that public participation plays in the EIA process.

### 3.2.1. Does public participation make EIA more effective?

There is multiple framing of the term “effectiveness” in IA practice and there are seven types of IA effectiveness criteria identified in the literature: “Procedural”, “Substantive”, “Transactive”, “Normative”, “Pluralism”, “Knowledge and Learning” and “Legitimacy” (see Section 2.2). These criteria bring new challenges with regards to measurement.

It could be argued that there is an improvement of EIA effectiveness if there is an improvement of any type of EIA effectiveness. In the past, empirical evidence has been produced which suggested that improving public participation would have beneficial effects on various aspects of IA (Sheate, 1996; Baker and Mclelland, 2003; Jha-Thakur *et al.*, 2009; Nadeem and Fischer, 2011). However, considering the development of EIA and changes in public expectation, it can be argued that public participation should only be claimed to be contributing to the effectiveness of EIA where it improves the substantive effectiveness of EIA.

As explained in Chapter 2, substantive effectiveness refers to whether IA achieves its goals (Sadler, 1996). There has been much development in discourses with regards to the substantive goals of IA which have been extended to include the pursuit of sustainable development, making legitimate environmental decisions, and reflects on the norm and expectation of the society. Compared with technical criteria, social-political principles are more difficult to measure and are of a pluralistic nature. Therefore, this question cannot be answered by examining the correlation between practice and environmental outcomes alone. It is necessary to first examine how would public participation helps EIA in reflecting the wider expectations of legitimacy and norms that exist in society.

### 3.2.2. “How” does public participation make EIA more effective?

The second research question refers to the causal relationship between public participation practices and the outcomes of the EIA. As explained in Chapter 2, there are various functions of public participation in IA, including technical and social-political functions. In existent discourses on these functions evidence varies. Technical functions such as providing additional information and quality review on

documents are relatively well supported by empirical evidence (e.g. Sheate, 1996). Procedural functions of public participation in IA enforce established procedures. The enforcement of established procedures are crucial for archiving the goals set up by them; however, procedural functionality only covers parts of IA discourse.

As argued in Chapter 2, the substantive goals of IA practice are not limited to ensuring consideration of environmental information in decision making. They include the goal of achieving sustainable development and embed the intent to improve decisions, address social concerns, and promote transformative changes in the decision-making process as well as social norms in the long run. Absorbing these objectives and the discourses developed pertaining to different aspects of IA effectiveness, the evaluation of substantive effectiveness can be organized into three inter-connected criteria categories:

- i. *Procedural functionality – These are based on the interrelationship between procedural and substantive effectiveness. They refer to the performance of public participation practice in achieving the EIA objectives laid out by legislation and policy.*
- ii. *Normative and Legitimacy functions – These absorb the idea of normative, pluralism and legitimacy discourses, referring to whether IA practice is conducted in a way that reflects the expectations from the stakeholders and wider social norms, and also whether the decisions made are viewed as justified.*
- iii. *Transformative functions – These absorb the discourses about learning and IA evolutions, referring to whether IA practices could provide feedback to the system and society and promote transformative changes, in particular to EIA practices and decision-making process.*

The above three categories aim to provide more comprehensive picture of the substantive goals of IA. Details about the examination of these criteria are further elaborated in Section 3.8 below. However, while the discourses (as explained in Chapter 2) identify evaluation criteria for different aspects of IA effectiveness, they do not particularly refer to the public participation component in IA practices. As a

result, this research takes an inductive approach and attempts to link public participation to these criteria.

### 3.3. Definitions and Scope of Study

This section defines and outlines the scope of study of this research project.

#### 3.3.1. “Public Participation”

“Public participation” is used as a blanket term and envelopes all activities in the EIA process that aim to “Inform”, “Consult”, “Involve”, “Collaborate” or “Empower”, i.e. the Spectrum of Public Participation by IAP2 (2014). It includes activities that are conducted as part of the statutory requirements under the EIA Ordinance and other policies. It also includes activities that are conducted voluntarily by project proponents and third parties (see Table 3.1).

It is not suitable to categorise Hong Kong’s EIA public participation practices into any of the categories of IAP2 for two reasons. First, the research focuses not only on the level of empowerment as a factor affecting the outcomes. Second, there is no clear mission or promise in most public participation activities. The EIA Ordinance in Hong Kong only outlines the procedures; the non-statutory activities do not publicise the agenda of the hosting organisation. As a result, this research looks at “public participation” defined by the functions of activities rather than with reference to their intent.

**Table 3.1 Public Participation Activities**

Statutory under the EIA legislation	Voluntary or by third parties*
<ul style="list-style-type: none"> <li>• <i>Public Inspection of Project Profile</i></li> <li>• <i>Public Inspection of EIA Report</i></li> <li>• <i>Stakeholder/ Community Liaison**</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Public relation or engagement activities by the Project Proponent</i></li> <li>• <i>Stakeholder/ Community Liaison**</i></li> <li>• <i>Publication and information circulation by Third Party</i></li> <li>• <i>Lobbying activities by the concerned party or individual</i></li> <li>• <i>Others similar activities</i></li> </ul>

- \* Only if these activities were targeted at the EIA or involving EIA in the distributed information/dialogue/lobbying
- \*\* It could be a requirement under the Environmental Permit or done voluntarily by the Project Proponent (see Chapter 4)

### 3.3.2. “Hong Kong’s EIA practice”

Hong Kong’s EIA practice starts from the application of the EIA Study Brief and concludes with completion of Environmental Permit requirements, including monitoring and audit. Hong Kong’s EIA practices can be divided into three stages which are differentiated by the progress and nature of the EIA functions:

- i. *Preparation of EIA Report – From the Submission of the Project Profile and application of the EIA Study Brief to the submission of EIA report for approval*
- ii. *Review of the EIA Report and Approval – From the Submission of the EIA Report to the approval of the Environmental Permit*
- iii. *EIA Follow up – From the approval of the Environmental Permit to finishing all the Environmental Permit Requirements*

This research project covers all the public participation activities that occur within these three stages. Further details about the EIA system in Hong Kong is given in Chapter 4.

## 3.4. **Research Approach**

This PhD research is a form of “Basic Research” which focuses “refuting or supporting theories that explain how the social world operates” (Neuman, 2000, pp.23-25). It uses an inductive approach that draws empirical observations from the real world and develops hypothesis and theories from them (Crowther and Lancaster, 2008).

### 3.4.1. Inquiries

Public participation outcomes are interpreted as products constructed and shaped through public participation processes. The inductive research identifies how these products are constructed and shaped in the process.

From existent literature, it is recognized that the development and performance of IA systems are influenced by contextual factors including: the Legal framework; the Political / Administrative system; the Socio-economic system; and the natural environment. Furthermore, the capacity of actors determines whether the objectives and ambitions are achieved (Kolhoff, Runhaar and Driessen, 2009). In Hong Kong, the EIA system regulated is by the EIA Ordinance, the Technical Memorandum and the Guidance Notes published by the Environmental Protection Department. The implications of contextual factors on the development of Hong Kong's EIA system have already been studied (see Chapter 4 for details). Since the EIA Ordinance and Technical Memorandum have remained mostly unchanged over the last 20 years, it is not necessary to undertake in-depth study upon them..

- *In contrast, the implications of contextual factors on Hong Kong's EIA performance are rarely seen in literature, especially in recent years. As a result, this research looks at publication participation and addresses the two following primary points What are the public participation outcomes in Hong Kong's EIA practices?*
- *What are the implications of the contextual Factors on the above outcomes?*

#### 3.4.2. Approach

There were four major considerations when deciding upon the research methods to use in this thesis. First, the approach (or approaches) must be able to address the research questions of how public participation could make EIA more effective in achieving its environmental and socio-political goals. Second, there is no tailored criterion for evaluating public participation performance in EIA. While evaluation criteria have been established in existent literature (e.g. Annandale, 2001; Chanchitpricha and Bond, 2013), these criteria were designed to evaluate the effectiveness of the IA system design and implementation. As this research instead focuses on the outcomes of EIA practices, these criteria were not applicable. Third, the implication of contextual factors is understudied. There are a limited number



of in-depth empirical studies that explain how the contextual factors and subfactors affect outcomes, particularly with regard to Hong Kong. Lastly, the methods need to be fit within the available budget and resources.

After considering the above issues, it was decided that the thesis would utilise in-depth empirical case studies with qualitative research methods. Creswell (2009) suggested three criteria for selecting a research design: the research problem, personal experiences, and audience. In deciding upon the research method, there was not much consideration of either personal experiences or audience. The researcher have personal experience of both quantitative and qualitative methods and commonly used in the field of IA effectiveness. It was not necessary to design the research to fit personal experiences or audience expectation. However, with a limited budget and resources, it was concluded that it would not be feasible to conduct large scale quantitative surveying works.

Qualitative methods were considered to be suitable for addressing this thesis's research questions. Qualitative, quantitative and mixed methods are associated with different worldviews, (Creswell, 2009), and also apply different logics (Neuman, 2000). The nature of this research is inductive; public participation outcomes are understood to be products of mutual constructs under particular contextual factors. The subject has yet to be well studied; with causal relationships and detailed parameters are not clear. These characteristics do not favour quantitative methods but are suitable for qualitative research (Creswell, 2009).

Qualitative research methods highlight cases and contexts, which "researchers discuss in their social context and develop ground theories that emphasize tracing the process and sequence of events in specific settings" (Neuman, 2000, p.144). In qualitative research, "case" could refer to an individual, group, institution or community (Gillham, 2000). Section 3.5 provided further explanations on the set up of the case studies in this research.

### 3.5. Methodologies for Empirical Case Studies

Case study research is a strategy of inquiry that explores in depth a program, event, activity, process or individuals (Creswell, 2009). This section addresses three issues: what does 'case' mean; case selection, and collection of data.

#### 3.5.1. Defining "Case"

"Case" can refer to a unit of human activity associated with individuals or groups (Gillham, 2000). For a case study, context is a critical component to achieve understanding, as the meaning of social actions depend on the context in which they appear (Neuman, 2000).

The objective of this research is to study the outcome of public participation practices in EIA; thus, EIA practices are the "case". It could frame an EIA as a single case or divide it into cases. While the context of a case is critical, the context changes during an EIA project cycle. As discussed in Chapter 4, there are three major public participation windows in Hong Kong's EIA practice, and these divide EIA practice into three stages: "Preparation of the EIA Report", "EIA Report Review and Approval" and "Post-EIA Approval". In each of the stages, public participation practices are embedded with different intended objectives, involve different actors, and require different actions. As such, the public participation practices in the EIA process could also be divided into three cases. Therefore, this research adopts the approach of dividing EIAs into three stages and presents each of the stages from individual cases. Further justification of this methodological decision is given in Section 3.5.2.

The case study focus on the interactions between actors and contextual factors on is illustrated in Figure 3.1. As already noted, actors and contextual factors vary between EIA projects and the implications of contextual factors vary in each stage of an EIA.

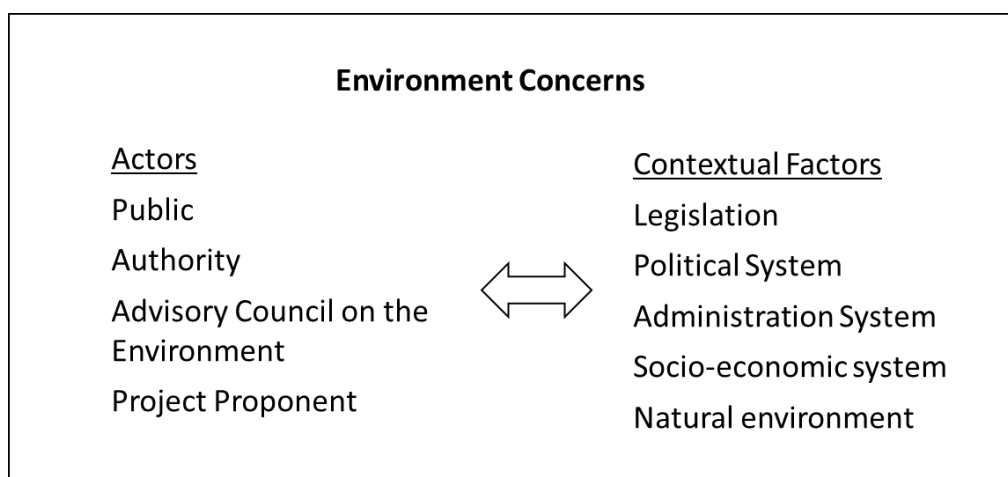


Figure 3.1 Framing of “Case” in this research

### 3.5.2. Case Selection

There are three methodological considerations in case selection; setting the scope of a case; deciding the number of cases to be studied; and choosing selection criteria.

As discussed in Section 3.5.1, EIA practice can be framed as a single case or can be divided into three cases with regards to public participation practices. Ideally, framing an EIA project as a single case that complies with three sub-cases would allow for a complete analysis of how public concerns are raised, addressed, and implemented throughout the full cycle of a project. However, in an examination of potential cases, this framing is unsuitable. This is for a number of reasons. First, most large-scale projects have a long project time span. A project may take years to prepare the EIA and then require a number of years to complete construction. For example, the Shatin to Central Link first submitted a project profile in 2002 and is still being constructed (as of January 2020). Using a single EIA would require choosing an EIA that started a long time ago. Such a case would be unlikely to represent the current social-political context. Second, a project that has a high intensity of public participation activities during one EIA stage may not possess the same intensity in the other stages. In order to comprehensively study the implications of public participation on EIA outcomes, it is more suitable to conduct cases studies for each of the three stages of EIA practices and, in so doing, to select cases individually for the three stages.

The second and third considerations relate to how many, and which, cases to study. Conventionally, case studies tends to focus on multiple cases and how this can lead to the building of theory through comparison (e.g. Neuman, 2000; Flyvbjerg, 2004). In more recent years, some scholars have argued that single studies can be generalized and are as valuable as using multiple cases. Flyvbjerg (2004) argued that a single case study could be used to generalize the finding through falsification (i.e. finding black swans). As for the strategies for case selection, Flyvbjerg (2004) further suggested that a representative or random sample may not be the best strategy by which to obtain the greatest possible amount of information, and that atypical or extreme cases which activate more actors and basic mechanisms often reveal more information.

Referring back to the discussion on theories in Chapter 2 and this study's research questions, it is noted that existing theories of public participation are not comprehensive. There are missing components with regards to the causal relationship that exists between public participation practices, and the implications of contextual factors have yet to be fully incorporated. The objectives of this research focus more on examining theoretic discourses than outlining the general applications of public participation or EIA practices in Hong Kong. Therefore, investigating "critical" cases that activate more actors and basic mechanisms as suggested by Flyvbjerg (2004) is a more appropriate approach to adopt. In this research, critical case means the potential to reveal information of the nexus between actors and contextual factors in addressing environmental concerns. The case selection looked for cases that showed a high level of engagement among actors, especially from civil society. With consideration of available time and resources, it was decided to conduct three individual case studies for the three stages of public participation practices in Hong Kong's EIA, so as to cover as many aspects as practicable.

With regards to time considerations, all of the EIA reports which had approved under the EIA Ordinance<sup>6</sup> by May 2016 were considered as potential case studies.

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<sup>6</sup> Refers to the EIA Ordinance Register Office Website:  
<https://www.epd.gov.hk/eia/english/register/aeiara/all.html>

Subsequently, the case selection took practical considerations into account. The case studies would require detailed information of public participation practices for analysis, only the EIAs with accessible information would be considered. Meanwhile, since the author was an environmental consultant and personally involved in the technical assessment of some of the EIAs, the potential appearance of a conflict of interest considered in the case selection and the EIAs he personally involved would be avoided.

#### *The Preparation of the EIA Report Stage*

Among the different types of projects that require an EIA, strategic planning project processes are the most transparent. These projects are public work projects under the Civil Engineering and Development Department and the Planning Department. The major strategic planning projects conduct public engagement activities in parallel to the EIA, and reports are produced pertaining to project progress and enquiries from the public. These provide sufficient information for the in-depth analysis.

There have been three major strategic planning projects in recent years: *Hung Shui Kiu New Development Area*, *Tung Chung New Town Extension*, and *North East New Territories New Development Areas*. The *Hung Shui Kiu New Development Area* project was excluded from the selection because the EIA report of the project had yet released for public access when the data collection started. In addition, the author's personal involvement in the preliminary environmental study of this project meant that there was a potential conflict of interests.

Both, the *Tung Chung New Town Extension* project and *North East New Territories New Development Area* project underwent three stages of public engagement, received public attention with regard to environmental impacts, and there were ongoing environmental arguments during the whole project development and EIA process, (see Development Bureau and Civil Engineering and Development Department, 2012; Civil Engineering and Development Department and Planning Department, 2009). Both cases showed the commitments of the respective

project's proponent and civil society to the public participation process and were deemed to be suitable to be empirical case studies for this research project.

After screening available information, it was concluded that the *Tung Chung New Town Extension* EIA was the better option. The *Tung Chung New Town Extension* EIA started in 2012 and was approved in 2015; the *North East New Territories New Development Area* EIA started in 2007 and was approved in 2013<sup>7</sup>. The overall availability of information pertaining to the *Tung Chung New Town Extension* was better than that for the *North East New Territories New Development Area* Project. For example, while comments on the *Tung Chung New Town Extension* project from concerned groups were mostly still available on these groups' websites, equivalent comments pertaining to the *North East New Territories New Development Area* project were not. As a result, the *Tung Chung New Town Extension* was selected for the focus of the empirical case study on the EIA preparation stage.

#### *The EIA Report Review and Approval Stage*

The empirical research for public participation during the EIA report review and approval stages required information about the contents of comments submitted by members of the public and how these comments were considered. The ACE played an important role in the review of EIA reports, and their discussions on the subjects were crucial for the in-depth analysis undertaken in this project. The case selection was limited to EIAs reviewed by ACE.

A major constraint to information collection is that the comments (and responses to comments) received by the Director of Environmental Protection during the public inspection period are confidential and not put in the public domain. Therefore, this information could only be obtained through other means. However, there is one exceptional case that provided a full list of comments and responses to comments about the EIA report. This exceptional case was the *Development of the Integrated Waste Management Facilities Phase 1*. This project was proposed

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<sup>7</sup> Refers to the EIA Ordinance Register Office Website:  
<https://www.epd.gov.hk/eia/english/register/aeiara/all.html>

by the Environmental Protection Department itself. The EIA of the project was first submitted for approval in Feb 2011, but was subsequently withdrawn and resubmitted for approval in Nov 2011. The EIA report of the second submission included the comments and responses-to comments received during the first public inspection process (a total of 319 sets). The EIA subcommittee of ACE reviewed the EIA report of both submissions and discussed the environmental concerns in depth<sup>8</sup>. Although the comments regarding the EIA report of the second submission were not available for public access, it is expected that the comments and concerns would be similar as the time gap between the two submissions was short, the project components and public concerns are mostly unchanged.<sup>9</sup> The abundance of information, a relatively high number of comments received and detailed discussion in the ACE regarding the environmental concerns meant that this case was the obvious contended for the empirical study with regard to the EIA review and approval stage.

The EIA of the *Development of the Integrated Waste Management Facilities Phase 1* was conducted by AECOM, the company in which the author of this thesis worked. However, the whole EIA was conducted by another team, and the author was not involved in any part of the EIA.

#### *The Post-EIA Approval Stage*

The empirical research focuses on the use and practice of Stakeholder/Community Liaison Groups. As of May 2016, there were 22 projects needed to establish Stakeholder/Community Liaison Group(s) under their environmental permits, this number included the five Shatin to Central Link EIAs, which shared the same series of environmental permits. The Shatin to Central Link – Mong Kok East to Hung Hom section EIA was omitted from case selection due to the author's personal involvement in the technical assessments of this project. All of the other 21 projects were screened to check; i) whether the individual project had started sufficiently long ago so that project outcomes could be reviewed; ii) whether

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<sup>8</sup> The 116<sup>th</sup> and 118<sup>th</sup> EIA subcommittee meeting, the meeting minutes are available at: [http://www.epd.gov.hk/epd/english/boards/advisory\\_council/maincontent.html](http://www.epd.gov.hk/epd/english/boards/advisory_council/maincontent.html)

<sup>9</sup> Based on desktop searching

meeting materials and minutes were available; and, iii) whether discussions in meetings were environmentally focused.

After screening the project websites and available minutes it was found that the Telegraph Bay Barging Point Community Liaison Group under the South Island Line (East) stood out from the rest of the projects and liaison groups. The EIA and environmental permits for the South Island Line (East) project were approved in 2010<sup>6</sup>. The construction works have been mostly completed, and most of the community liaison groups had finished their operations<sup>10</sup>. The Telegraph Bay Community Liaison Group had finished 15 rounds of meetings. There was active participation among the local community members. Compared to other Community Liaison Groups, the discussions within the Telegraph Bay Community Liaison Group meetings were more environmentally focused. The local community pressed for several additional environmental impact management and mitigation measures to be implemented, which allowed for an analysis of how project proponent respond to different types of enquires raised in this kind of practice<sup>11</sup>. As a result this case was selected for the empirical research on the Post-EIA approval stage. The author did not have any personal involvement in this project.

### 3.5.3. Collection of Data

Case studies use multiple sources of evidence, with each source different strength and weakness (Gillham, 2000). The data collected with regard to each of the case sought to gather information relating to three components: i) The environmental concerns of the cases ; ii) The actions taken by each actors; and, iii) The implications of contextual factors on outcomes.

As previously noted, a case is formed around environmental concerns. The comments submitted to the Environmental Protection Department at the corresponding EIA stage form the basis of this information. However, accessibility to this information is highly restricted. As a result, information that was not the

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<sup>10</sup> Base on the project website. However, when checked in May 2018, the project website is no longer accessible.

<sup>11</sup> Referring to the meeting minutes at released on the project website, the details are explained in Chapter 7.



original – but was close to the original – was utilised. This was done by screening project and authority documents and through Google searches. The environmental concerns identified in public comments was the starting point of further data collection. In the case studies, environmental concerns were traced through computer searches of keywords and manual screening of the relevant chapters in these documents.

The data collection was primarily undertaken through document review and processing documents' content. Interviews with officers and practitioners were not feasible as they are not allowed to disclose unpublished information to third parties<sup>12</sup>. There were a number of weaknesses pertaining to the data collected. This section first describes the key sources of information, then Section 3.7 comments on the validity and reliability of the data.

#### *The Preparation of the EIA Report Stage*

The major constraints that were faced with regard to obtaining empirical evidence in this stage was that the Environmental Protection Department would not disclose the comments that it had received during the public inspection. Nor would it provide official responses to them. As a result, the only comments that were obtained were those that were disclosed voluntarily and were in the public domain (mainly from the environmental NGOs). These were then cross-examined with the EIA Study Brief to determine whether the comments submitted by the public were addressed. The key documents used to evaluate the public participation outcomes are listed in Table 3.2.

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<sup>12</sup> Checked with personal connections in the authority and from personal experience.

**Table 3.2 Key Document Reviews for Preparation of EIA Report Stage**

<b>Documents</b>	<b>Source</b>	<b>Objectives</b>
Project Profiles	EIA Ordinance Register Office <sup>[1]</sup>	Review of project elements and changes to project design during the project development (if more revised project profile(s) was submitted).
Submission to Project Profiles	Websites and press releases from NGOs and concerned groups	Review of concerned subjects among the members of the public; Review of actions taken by the concerned groups.
EIA Study Briefs	EIA Ordinance Register Office <sup>[1]</sup>	Review of requirements for the EIA; Review of whether and how public submissions are reflected.
Project Documents and Reports	Project Proponent Website	Review of project proponent's action taken regarding public comments; Review of changes of project designs during the project development.
EIA Report	EIA Ordinance Register Office <sup>[1]</sup>	Review of whether and how the issues of public concerned were addressed.

Remarks:

[1] The EIA Ordinance register office is under the Environmental Protection Department and is the authority that administers EIA applications. The EIA register office has a dedicated website for EIA related materials:

<https://www.epd.gov.hk/eia/>

*The EIA Report Review and Approval Stage*

There is no known case where the project proponent engaged in any additional public participation activities at this stage. The main public participation activity was the Public Inspection of the EIA report; however, additional actions from the public such as campaigns and lobbying are noted.

Similar to the public inspection of the Project Profile, a major constraint is the accessibility of raw information. There is no statutory requirement for the Environmental Protection Department or project proponent to release either received comments or their respondents. This, therefore, limited case selection to those which had accessible information. The key documents used to evaluate the public participation outcomes are listed in Table 3.3

In addition, as a result of the fact that the EIA Ordinance Register Office provided the number of received comments in each of the approved EIA reports, the researcher seized the opportunity to review their statistical distribution and noted trends in the number of comments submitted with regards to the different types of project.

**Table 3.3 Key Document Reviews for EIA Report Review and Approval Stage**

<b>Documents</b>	<b>Source</b>	<b>Objectives</b>
EIA Report	EIA Ordinance Register Office <sup>[1]</sup>	To examine and cross-examine the comments and queries submitted by the public
Comments and Respond to Comments from the public	EIA Ordinance Register Office (contained in the EIA Report) <sup>[2]</sup> , Websites from NGOs and concerned groups	Review of concerned subjects among the members of the public Analysis of the arguments and supports in the comments.
Third-Party publications	Websites from NGOs and concerned groups Social Media	Review of concerned subjects among the members of the public Review of perceptions and other actions taken
ACE Meeting Minutes	Environmental Protection Department Website	Review of whether and how public concerns are discussed and reflected in the recommendations.
Environmental Permits	EIA Ordinance Register Office <sup>[1]</sup>	Review whether the public concerns are reflected in the permit conditions

Remarks :

[1] The EIA Ordinance register office is under the Environmental Protection Department and is the authority that administers EIA applications. The EIA register office have a dedicated website for EIA related materials:

<https://www.epd.gov.hk/eia/>

[2] The selected case is a special case that contains comments and respond to comments in the EIA report.

### *The Post-EIA Approval stage*

Unlike the two previous stages, there is no statutory requirement under the EIA Ordinance to conduct public participation activities after the approval of the EIA or the environmental permits. Members of the public can file enquiries or complaints regarding the environmental impacts of a project, but the level of participation is

minimal. In recent years, environmental permits have, on occasions, contained conditions that required the given project proponent to liaise with stakeholders during the implementation of the project. As Chapter 4 notes, the actual requirements vary from project to project. This research focuses on the implementation of “Community Liaison Groups” established under the requirement of environmental permits (see Chapter 4 for details).

The reasons that the research focuses on stakeholder/community liaison group practices is because these establish a formal relationship between the project proponent and the stakeholders/community members. Compared to the conventional practices that relies on individuals to file complaints to the Environmental Protection Department and other passive forms of liaison (such as hotlines), stakeholder/community liaison group practices allow civil society to have a higher level of engagement.

Four categories of key documents were reviewed, as shown in Table 3.3. Since the author could not attend the liaison meetings personally, the meeting minutes were the primary source of information about issues discussed. As the minutes are summaries of the discussion made by the project proponent, two interviews were conducted to aid the author’s comprehension. . The justification for conducting additional interviews as well as details pertaining to the same are explained in Section 3.6

**Table 3.3 Key Document Review for Post- EIA Approval Stage**

<b>Documents</b>	<b>Source</b>	<b>Objectives</b>
EIA Report	EIA Ordinance Register Office <sup>[1]</sup>	To review finding and recommended mitigation measures on the concerned subject. Also used to cross-examine the comments and enquiries from the members of the Community Liaison Group
Environmental Permits	EIA Ordinance Register Office <sup>[1]</sup>	Review the permitting conditions on the requirement of community liaison and concerned subjects.
ACE Meeting Minutes	Environmental Protection Department Website	Review of the discussion and recommendations regarding the concerned subjects.
Community Liaison Group Meeting Minutes	Project Website by the Project Proponent	Review of the agendas of the Stakeholders; Review whether and how the subjects of concerned were addressed in the process.

Remarks :

[1] The EIA Ordinance register office is under the Environmental Protection Department and is the authority that administers EIA applications. The EIA register office have a dedicated website for EIA related materials:

<https://www.epd.gov.hk/eia/>

### **3.6. Interviews**

A total of eight interviews were conducted from June to August 2016 and in August 2017. These eight interviews can be divided into two groups: Two interviews were conducted specifically for the case studies of the Telegraph Bay Barging Point Community Liaison Group under the South Island Line (East), and six interviews were conducted to obtain comments about the capacity of the key actors. All of the interviewees were purposefully selected. Purposive sampling is suitable for situations where interviews are in-depth and enabled deeper understanding of the be garnered rather than being focused upon issues of generalisation (Neuman, 2000). Within the context of this research, these interviews sought to enable the

author to gain specific information and insight pertaining to the cases studied. The selection of the interviewees was based on their background and experience of the subject. The rationale for each interviewee is given in Table 3.4. For the second group, two more interviews were considered but these did not materialise because the potential interviewees did not reply to the invitations sent by the author. The following sections provide details pertaining to the selection of interviewees and the objectives of the interviews.

**Table 3.4 Rationale of Interviewee Selection**

<b>Interviewee</b>	<b>The Rationale of Interview Invitation</b>
Interviewee #1	Experience in Environmental NGO
Interviewee #2	Involvement in the Telegraph Bay Barging Point Community Liaison Group
Interviewee #3	Experience in Advisory Council on The Environment
Interviewee #4	Experience in Project Environmental Management
Interviewee #5	Experience in Environmental Consultancy and EIA authority
Interviewee #6	Experience in Advisory Council on The Environment
Interviewee #7	Experience in EIA authority
Interviewee #8	Involvement in the Telegraph Bay Barging Point Community Liaison Group

#### 3.6.1. Interviews for the Telegraph Bay Community Liaison Group

Meeting minutes were the primary source of information about the operations of the community liaison groups. The meeting minutes provided summaries of the meetings and were prepared by the project proponent. As a result they do not provide transcripts of comments made and may not include details that are unfavourable to the project proponent (see also Section 3.7). Also, screening the meeting minutes, it was noted that there were additional interactions and

activities between meetings. As a result, interviews (i.e. #2 and #8) were conducted to validate the information contained in the meeting minutes and to obtain information about the additional interactions and activities that were not covered in the minutes.

The two interviewees were deliberately chosen. They were local community representatives of the Telegraph Bay Barging Point Community Liaison Group. The interviews focus on the environmental conflicts commented upon in the meeting minutes and the interviewees were asked about their concerns and the responses they got. The author also vigorously probed the interviewees as to any comments that they had about the responses they had received. Upon probing, a number of the interviewees commented upon aspects that were not covered in the meeting minutes; these issues were then further probed so that additional insights could be gained.

It was also considered apposite to conduct an interview with the project manager of this project. However, it was impossible to contact the project manager in charge. As a result, no interview took place.

### 3.6.2. Interviews for the Comments about the Engagement of the Key Actors and Views on the EIA System

The other six interviews were neither connected with any of the case studies nor used in the determination of the public participation outcomes of these cases. Instead, these interviews were conducted to verify how the organizations/institutions involved in the public participation process obtained their point of view about the works as well as the capacity of the organisations/institutions. All of the interviewees have at least three years of experience working in that organisation/institution. However, it must be stressed that the interviewees only represented themselves not as representatives of the organisations/institutions. They were asked to provide personal comments based on their experiences, not to comment from the point of view of the organisation/institution they worked for. Their comments were used to inform the discussion of how actors act and whether the EIA establishment is capable of address the environmental concerns raised by the public. The interviews in this



groups were undertaken in order to reveal information about the implications of contextual factors on actors' actions. Their views and comments also provided insights that were subsequently of use in the evaluation of public participation outcome.

The interviews were semi-structured with pre-set questions tailored for each interviewee. The pre-set questions focused on how the organisation/institution that the individual interviewee was from was involved in the public participation process. Interviewees were asked as to whether they thought their organisation/institution had the capacity to effectively participate in the process (for #1) or address concerns raised in the public participation process (for #3 to #7); what the constraints were; and if they had any suggestions for improvement.

### 3.6.3. Interview Methods

Using semi-structured interviews, several open-ended questions were decided upon before individual interviews were held. This interview format provided flexibility and allowed the interviewee to comment more freely on the subject without being directed (Gillham, 2000).

In order to maximize the information obtained from the interviewees, much time was spent preparing the individual questions to be asked. The pre-set questions for each interview were tailored to the particular interviewee. The previous work of each interviewee was studied to decide on the topics to be covered in each interview, including their experience in the field and whether or not they had commented on specific issues in other previous publications and sources. Summary notes were made and brought along as references for directing conversations and follow-up questions. Before the start of the interviews, rehearsals were undertaken between the author and his PhD supervisor.

During the interviews, the interviewer attempted to maintain neutrality and to create a suitably relaxed and encouraging relationship (Rapley, 2004). The language used in the interview was decided by the interviewees (Cantonese or English). Among the eight interviews, six were conducted in Cantonese and two in

English. Techniques such as use of eye contact and the use of follow up questions to control the pace of the interviews were also used.

After the interviews, an English summary of the conversations was produced<sup>13</sup> and sent to the individual interviewee to make sure that the interpretation was correct and appropriate. The abstracts were revised if there were comments by the interviewee.<sup>14</sup>

#### 3.6.4. Ethics and Data Handling

Researchers are expected to respect participants and not put them at risk. This is a concept which should be applied to data collection, analysis and writing (Creswell, 2009). Although the number of interviews was small and did not include vulnerable groups, measures were taken to ensure that the interviews were conducted in such a way as to conform to the highest ethical research protocols..

The interviews were conducted according to the research ethics policies of the University of Liverpool. Ethical approval was obtained from the University of Liverpool School of Environmental Sciences Research Ethics Committee (FOSEETH (Environmental Sciences) ethics reference number: 063). The interviewees were given a sheet of information about the study, methodology, use of data and their rights to participate or withdraw in the email invitation. After they agreed to participate in the interview, a consent form was given to them prior to the start of the interview so that they could give their consent. The consent form included: acknowledgement of the purpose and nature of the study; consent to conduct the interview, acknowledgement of their right to withdraw; and optional items such as consenting to their voices being recorded, and the use of data in further publications).

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<sup>13</sup> All of the interviewees were asked whether it was fine for them to produce the summary in English. Since the EIA documents in Hong Kong are mainly written in English, it was expected that all of the interviewee would be able to read and write in English.

<sup>14</sup> NB: The summaries are attached in Annexe 1. However, given that the individual interviewees made references to individual interviewee's past working experiences, the summaries may provide hints as to identity. Annexe 1 will be omitted in all publicly accessible copies of the thesis.

Specific consideration was given to the political status of Hong Kong. Some of the interviews included discussion of the political system and the operations of the authority. Due to Hong Kong's illiberal political climate, some comments had the potential to be politically sensitive. To protect participants from any potential risk (e.g. accusations of whistleblowing), all the interview data was anonymised. The summary of the interviews will also be omitted from all publicly accessible copies of this thesis.

The storage and handling of interview data, i.e. the voice recording and transcripts followed the University of Liverpool ethics and data protection policies. The data are password encrypted, stored in secured devices, and will be deleted after this study is concluded.

### **3.7. Verification of Evidence**

The majority of empirical evidences used in this research were extracted from documents (see Section 3.5.3). The documents were reviewed for identifying environmental concerns and responses to those concerns. It is noted that these documents were prepared by the government and other organizations for various purposes. Measures were taken to verify the information before the documentation was analysed.

For the identification of environmental concerns, this research sought to obtain copies of original submissions. As the Environmental Protection Department refused to release copies of public submissions, this research relied on the open submissions from the public and the official summarized records. The relevant documents were cross-checked to make sure that the content aligned.

The identification and tracking of environment concerns required screening of multiple reports and documents. Conventionally content analysis adopt either manifest coding and latent coding, which the prior use the surface content of the text and the later use the implicit meaning of the text (Neuman, 2000). This research, however, used both methods. Environmental issues are inter-connected. It is necessary to understand the connections between issues before knowing the

nature of environmental concerns. For example, when a concern is raised about the number of vehicles on site, it could be a concern over traffic implications, or a concern over the air quality or noise impacts from the vehicles, or a concern that incorporates all three issues (or aspects of the same). As a result, there is a need to trace the actions around the particular concern that has been raised. This would require using keywords search with computers (as to save time in searching through thousands of pages of documents) and manual screening to identify the nature of the concerns. The author's personal technical knowledge and experience as an environmental consultant helped in the identification of environmental concerns. While the environmental concerns in each of the case studies were summarised and categorized, they adopted corresponding criteria. These criteria are described when presenting the case study chapters (Chapter 5 to 7). As an additional verification measure, the initial findings of each of the case studies were also discussed with the author's supervisor.

Responses to the environmental concerns were divided into two types. The first type was technical responses such as amending project design and implementing additional measures. The technique used to identify these responses was similar to the approach noted with regard to identifying environmental concerns. The responses were screened by keywords with the help of computer, and manually to identify the nature of the responses. Since the information sources of the three case studies were different, different verification measures were taken. The case studies of Tung Chung New Town Extension and the Development of the Integrated Waste Management Facilities Phase 1 focus on the EIA process and environmental permitting. The technical responses were verified by tracing and examining the documents and events throughout the process to check if the time and events produced coherent justifications (see Gillham, 2000; Creswell, 2009). This was especially important if they included legally-binding documents such as planning application documents and environmental permits. The case study on the Telegraph Bay Community Liaison Group focused on the post-EIA environmental management. Since the project had been mostly completed when the case studies

were conducted in 2017, the technical responses could be verified through interviews (see Section 3.6) and project records.

The second type of response was non-technical responses, such as providing a justification, defending a criticism, or promising to provide better management. These responses were mostly verbal and did not include any traceable follow-up actions. While this type of response was identified from project reports and meeting minutes, project reports and meeting minutes only provide summaries of the viewpoints and do not necessarily cover all things that occurred within the events of which they provide summaries. The best way of verifying these responses was to check them directly with corresponding persons. However, due to the fact that the project decision-makings were not transparent (most of the meetings were held behind closed doors, and practitioners were not allowed to disclose non-published information to third parties), such verification could only be partly achieved for the Telegraph Bay Community Liaison Group case study. There was no feasible way to further verify the accuracy of the responses. During the data analysis, the author was critically aware of this limitation and was consequently most careful in his interpretation of the data.

While this research primarily used three individual case studies, it also took into account considerations pertaining to the generalizability of the initial empirical observations. After each individual case study, observations were checked to see if similar observations could be found with regard to other projects. This was mostly achieved by using a computer to search through the EIA documents of other projects. This additional procedure helped to justify the generalizability of the case study findings, especially in the presence of contradictory observations.

### **3.8. Evaluation Criteria**

As inductive research, it was decided not to adopt existing evaluation criteria or outline a list of hard-framed criteria / a tick-box style checklist for the evaluation of public participation outcomes. Instead, specified evaluation criteria were established.

### 3.8.1. Procedural Functionality

The procedural functionality refers to the argument that public participation could benefit EIA through comprehending the EIA procedures. Chapter 2 (Section 2.2.1) established three procedural effectiveness categories: fulfilling international obligations; conforming to IA principles; and enforcement and implementation. Hong Kong's EIA system does not contain any international obligations, thus the evaluation criteria for procedural functionality focused on the latter two.

Public participation assumes a function of information provision and quality assurance that help the implementation of other components in the process (UNECE, 2014). Meanwhile, literature suggested that public participation allow publics to play roles in the documentation, quality assurance and monitoring the implementation (Sheate, 1996; O'Faircheallaigh, 2010). These theoretic functions were adopted as the basis in evaluating the public participation outcomes.

### 3.8.2. Normative and Legitimacy Functions

The normative and legitimacy functions refer to whether EIA practice is conducted in a way that reflects the expectations of stakeholders and wider social norms. They also refer to whether the decisions made are justified. As explained in Chapter 2, public participation has embedded social-political functions, and these functions have interfaces with the pursuit of normative, pluralist and legitimacy effectiveness.

Public participation practice has intrinsic value in overall EIA practice. In a democratic society, members of the public and affected individuals expect to be involved, and conducting public participation can be viewed as a way to fulfil this political or democratic norm (Glucker *et al.*, 2013). In addition to its intrinsic values, public participation is a means to pursue wider social-political objectives. While normative, pluralist and legitimacy aspects have developed discourses of their own with regard to EIA effectiveness, public participation provides a common ground. It is suggested that public participation could reflects pubic interest, incorporates different values, reduces conflicts, and improves the legitimacy of environmental decisions (Morrison-Saunders and Retief, 2012; Pope, 2013; Chanchitpricha,

Morrison-saunders and Bond, 2019). These functions are linked to the IA's substantive objectives of making quality or justified environmental decisions. In current discourse, public participation influences decision-making and delivers the above social-political objectiveness through a wider environmental governance framework which emphasizes transparency and public empowerment (Meuleman, 2015). As such, the cases were evaluated by its performance in helping EIAs reflect the norms and values of a society, reflect intrinsic values, promote wider environmental governance, resolve conflicts, and make legitimate environmental decisions.

#### 3.8.3. Transformative Functions

Transformative functions here refer to the objectives of providing feedback to the actors, system and society, as well as facilitating transformative changes to EIA practice and decision making in the long run. It recalls the original intent for IA to change environmental decision making and discourse about knowledge and learning (See Chapter 2). The literature suggests that interaction and dialogue between stakeholders are key mechanisms by which to enable learning in the process (Diduck *et al.*, 2012; Jha-Thakur *et al.*, 2009). It follows, all else being equal, that public participation, alongside the aforementioned interaction and dialogue, has the potential to facilitate single and double-loop learning. The case studies, therefore, evaluated the performance of public participation in promoting dialogues among the stakeholders, and facilitate learning in the process.

#### 3.8.4. Overview

To conclude, the evaluation criteria are summarized in Table 3.5.

**Table 3.5 Overview of Evaluation Criteria**

<b>Category</b>	<b>Criteria</b>
Procedural Functionality	<p>Did public participation effectively provide environmental and project information to the public?</p> <p>Did public participation help bring in additional environmental information from the public?</p> <p>Did public participation help the quality assurance of the IA documentation?</p> <p>Did Public participation help the enforcement and implementation of EIA?</p>
Normative and Legitimacy Functions	<p>Did public participation reflect the social views on the environment?</p> <p>Did public participation reflect the social views and norms on environmental decision-making?</p> <p>Did public participation help resolve conflicts</p> <p>Did public participation reflect the shift to environmental governance, i.e. increased transparency and empowerment?</p> <p>Did public participation improve the legitimacy of IA practices and environmental decision making?</p>
Transformative Functions	<p>Did public participation provide opportunities for dialogues among the party?</p> <p>Did public participation facilitate social and institutional learning?</p>

### **3.9. Summary of Methodology**

This PhD research project used an inductive approach to answer the research questions “Does public participation make EA more effective? “ and “How does public participation make EIA more effective?”. It argued that IA could only be claimed as effective if it could achieve the substantive objectives behind its design. This includes the objectives of protecting the environment, enabling better decisions, and facilitating transformative changes to the decision-making process. Regarding these substantive objectives, it is suggested that public participation may provide various functions under three categories: “Procedural functionality”; “Normative and Legitimacy functions”; and “Transformative functions”.



This research aimed to answer the above research questions by conducting empirical case studies in Hong Kong. Hong Kong has a special socio-political context. It has an illiberal democratic political system with a highly developed civil society. By examining public participation outcomes Hong Kong's EIA practices, it could enrich the international discourse of public participation and IA effectiveness by providing insights from a region with different contexts.

This research used three individual in-depth case studies to evaluate the three EIA stages of Hong Kong's EIA practice: Tung Chung New Town Extension for the Preparation of EIA Report stage; the Development of the Integrated Waste Management Facilities Phase 1 for the EIA Report Review and Approval Stage; and the Telegraph Bay Community Liaison Group of the South Island Line (East) for the Post-EIA Approval Stage. The case studies were not designed to provide representative or general pictures of Hong Kong's EIA practices. They are critical cases that were expected to activate more actors and contextual factors. The "case" refers here to actors' actions and the implications of contextual factors upon addressing environmental concerns raised in public participation practices. The empirical data collection was primarily achieved through document reviews and extracting information from the same . Interviews were also conducted for supplementary information about the Telegraph Community Liaison Group and the wider contextual factors that impact Hong Kong's EIA practices.

For the evaluation of public participation outcomes, specified evaluation criteria were made with reference to the theoretical functions of public participation. They were divided into three category "procedural functionality", "normative and legitimacy functions" and "transformative functions".

#### **4. CONTEXTUAL BACKGROUND OF HONG KONG'S EIA PRACTICE**

Remark: During the revision of this PhD thesis, massive Anti-Extraction Bill Protests broke out in Hong Kong, which later evolved to full-scale democracy movement (since March 2019). The social and political context has undergone rapid, dramatic changes. The political and social context explained in this chapter mainly describe the background of the case studies (i.e. before the Anti-Extraction Bill Protests). However, it could be said that it contains the same contextual background that has lead to the democracy movements in 2019.

The principle of EIA was introduced to Hong Kong in the 1970s, and EIA became a statutory requirement under the EIA Ordinance in 1998. EIA in Hong Kong is attached to the Environmental Permit system that major infrastructure and planning projects are required to obtain a valid environmental permit(s) before commencing work. In general, there are three major steps in the EIA process: Project Profile stage, Submission of EIA report and Application of Environmental Permit. The Environmental Protection Department is the authority to administer and enforce the EIA Ordinance, which also developed policy and guidelines for the EIA implementation. While the EIA system looks typical in design, it must be noted that Hong Kong has a unique political and social context. Hong Kong has an “illiberal democratic” system. Although elections and public participation exercise take place regularly, citizen rights are limited in many aspects. This unique political and social context shaped the implementation of EIA, in particular to the public participation practices. This chapter describes and explains the development and settings of the current EIA system in Hong Kong, as well as the political and social context that shaped the practices.

##### **4.1. The Development of EIA in Hong Kong**

The Hong Kong government first introduced the use of EIA in 1979 to selected private and public sector projects, following the recommendation of a government report (Au, 1998b; Wood and Coppell, 1999). EIA was later systematically applied to public works projects since 1986, and then became a statutory requirement for listed (in schedule 2 and 3 of the ordinance) infrastructure and planning projects in 1998.

The EIA bill was one of the last major legislations implemented by the British colonial government. The bill was passed in January 1997 after two years of drafting and discussion (Au, 1998b) and adopted as the Environmental Impact Assessment Ordinance (EIAO). The legislation of the EIA process was described as “Gives teeth to Environmental Assessments” (Au, 1998a). The legislation aimed to solve problems that were observed in practice at that time, which included:

- Some developers ignored mitigation measures after gaining approval
- Unclear responsibility for contractors and sub-contractors
- Patchy quality of EIA
- The slowness of the process; and,
- Public input only late in the process.

(Au, 1998a; Leverett et al., 2007)

After the EIAO was adopted in 1998, there was no significant change to the statutory requirements of EIA or the scope. The development of EIA mostly shifted to administrative-led initiatives. In 2000, the EIA report of Sheung Shui – Lok Ma Chau Spur Line EIA was rejected, which sparked a wave of administrative measures in enhancing the EIA mechanism. The Director of Environmental Protection rejected the EIA report for three reasons: 1) *there would be potentially high direct environmental impacts arising from the Project*; 2) *the environmental impacts to be caused by the Project are likely to be prejudicial to the health or well being of the flora, fauna or ecosystems in the areas*; and, 3) *it has not been proven that there is no other practical and reasonable alternative* (Environmental Protection Department, 2000). As shown in a legislative council document, the Hong Kong government implemented additional measures to make EIA mechanisms ‘run more smoothly’. Among the measures are the strengthening of the use of Environmental Study Management Group (ESMG) and the establishment of the User Liaison Groups. These initiatives were mostly focused on enhancing the communication among key stakeholders, i.e. the Authority, Project Proponent and the Advisory Council on the Environment (ACE) (Environment and Food Bureau, 2001b).

In 2002, EPD started to release a series of Guidance notes. These guidance notes were the product of consultations with the ACE and User Liaison Groups<sup>15</sup>. They described good practice and expectations of the EIA process and the methodologies in assessing the impacts on each aspect of the environment. These guidance notes are not legally binding but occasionally act as ad hoc requirements by the Director of Environmental Protection. At the same time, a Technical Circular was made to give more detailed guidelines and procedures for government projects and proposals<sup>16</sup>. After the release of Guidance Note No.13 and No.14 in 2010, there were no more initiatives or major changes to the EIA mechanisms. The timeline of the major events is shown in Table 4.1 below.

**Table 4.1 Major events of Hong Kong EIA Developments**

Year	Event
1977	Government report recommended EIA Ordinance
1979	EIA first introduced through Administrative means
1986	Formation of EPD; systematic procedures for EIA introduced
1993	Government EIA reports made available to the public
1994	Formation of the Advisory Council on the Environment (ACE)
1995	Drafted EIA Bill presented to and supported by ACE
1996	Drafted EIAO submitted to Legislative Council for discussion
1997	EIAO Passed and enacted together with Technical Memorandum
1998	EIAO comes into effect
2000	Sheung Shui – Lok Ma Chau Spur Line EIA rejected
2002-2005	The release of EIAO Guidance notes 1 to 12, Technical Circular on guidelines and procedures for government projects and proposals.
2010	Revision of EIAO Guidance notes and release of EIAO Guidance notes 13 and 14

(Modified from Leverett *et al.*, 2007, with additional information from EPD's website and publications)

<sup>15</sup> As noted in each of the Guidance Notes

<sup>16</sup> The Environment, Transport and Works Bureau Technical Circular (Works) No.13/2003. Ref: ETWB(W) 271/32/103

## 4.2. Legislative Framework

As mentioned in the earlier sections, EIA in Hong Kong is set up by the Environmental Impact Assessment Ordinance (EIAO), which aims to *'avoid, minimise and control the adverse impact on the environment of designated projects through the application of the environmental impact assessment process and the environmental permit system'* (Environmental Protection Department, 2011). The EIAO can be divided into three sections: i) Set up a statutory procedure for designated projects.<sup>17</sup> ii) Authorizing the Director of Environmental Protection and public officers to exercise their duties. iii) Establish the Technical Memorandum on Environmental Impact Assessment Process.

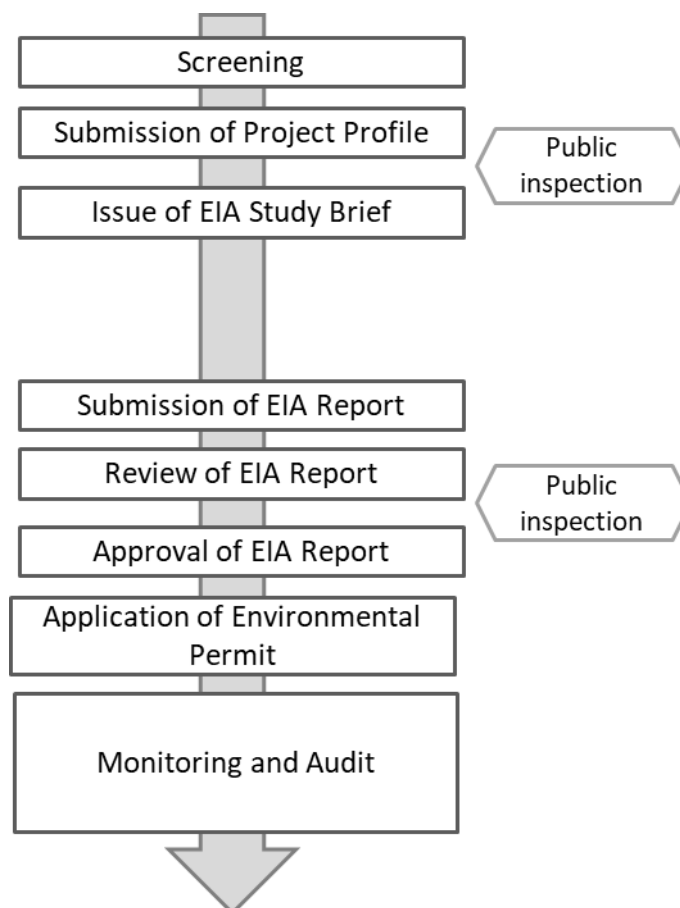
### 4.2.1. The Statutory Process

The EIA ordinance requires a project proponent who is planning a designated project to apply for an environmental permit before commencing work. The project proponent needs to trigger the EIA process by submitting a Project Profile to the Director of Environmental Protection to apply for an EIA study Brief; or, apply directly for an environmental permit if the project meets the conditions<sup>18</sup>. If a full EIA process was needed, the project proponent would be required to prepare an EIA report according to the Study Brief and the Technical Memorandum, and then apply for an environmental permit(s) with an approved EIA report. During the process, there are two statutory public inspection windows. The public can inspect the Project Profile and EIA Report and submit comments to the Director of Environmental Protection. Figure 4.1 shows the schematic flow of the statutory process.

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<sup>17</sup> Designated projects are any project that match the description in any category in the Schedule 2 or Schedule 3 of the EIA Ordinance.

<sup>18</sup> Section 5 of the EIA Ordinance



(simplified from Environmental Protection Department, 2011)

**Figure 4.1 Schematic Diagram of Statutory EIA procedure**

#### 4.2.2. Authorisation of power and binding of duty

The EIA Ordinance authorizes the Director of Environmental Protection and the officers administrative power to govern and enforce the statutory requirements outlined. It authorizes the Director of Environmental Protection to make decisions on the applications of EIA Study Brief, approval of EIA report and applications of Environmental Permits. At the same time, it binds the Director's decision that the decision on granting or refusing an environmental permit shall have regard to the following criteria:

- *the approved environmental impact assessment report on the register;*
- *the attainment and maintenance of an acceptable environmental quality;*

- *whether the environmental impact caused or experienced by the designated project is or is likely to be prejudicial to the health or well being of people, flora, fauna or ecosystems;*
- *any relevant technical memorandum;*
- *any environmental impact assessment report approved under this Ordinance or any conditions in an approval; and*
- *the comments, if any, submitted to him under section 7 (Public Inspection) on the report.*

(cited from Section 10 of the EIA Ordinance)

The EIA Ordinance also recognised the role of the Advisory Council on the Environment (ACE). The ACE is 'Government's principal advisory body on matters relating to environmental protection and conservation' (Environmental Protection Department, 2017). Under the ordinance, the ACE has the power to review and comment on the Project Profile and EIA report. If the Director of Environmental Protection deems it necessary, the applicant should present his environmental impact assessment report to the ACE<sup>19</sup>. While the legislation does not require the Director of Environmental Protection to fully adopt the comment or recommendation of the members of the ACE, there hasn't been any case that the Director of Environmental Protection made a decision that is contradicting to the suggestion of the ACE.

#### 4.2.3. Technical Memorandum

The EIA Ordinance included a section about the Technical Memorandum, that binds the merit of the contents of the EIA study and decisions made in the process. The technical memorandum set out principles, procedures, guidelines, requirement and criteria for; i) the technical content of a project profile, EIA study Brief and EIA report; ii) the basis that the Director of Environmental Protection needs to consider while making decisions; iii) taking advice from other authorities, and; iv) the imposition of environmental monitoring and audit requirements<sup>20</sup>.

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<sup>19</sup> Section 5-10 of the EIA Ordinance

<sup>20</sup> Summarized from Section 16 of the EIA Ordinance

The Technical Memorandum provides the guidelines and criteria of the assessment of each of the environmental aspects required, and these guidelines and criteria are legally bindings, i.e. both, the Director of Environmental Protection and project proponents are bound to follow them. If an environmental aspect is not included in any other existing ordinance or policies, it gives the Director of Environmental Protection the flexibility to decide the criteria, with reference to international experience.

#### **4.3. The Advisory Council on the Environment (ACE)**

As explained in Section 4.2, the Advisory Council on the Environment (ACE) is the government's principal advisory body on environmental matters. It currently consists of one Chairman, one Deputy Chairman and 20 members (a total of 22 members)<sup>21</sup>. The ACE has an EIA subcommittee, which consists of 17 members (from the 22 members). There are no official members, but government officials and/or their representatives would attend the meetings<sup>22</sup>. The members of the ACE are appointed by the Chief Executive on a 2-year basis. According to a document that the Environment and Food Bureau sent to the Legislative Council in 2001, the composition of the Advisory Council on the Environment is made up of persons appointed on a personal basis and nominations from business organizations and green groups. The composition was to *'ensure that ACE would take care of the major stakeholders when discharging its duties'* (Environment and Food Bureau, 2001a).

In operation, the Director of Environmental Protection would notify the ACE members upon receiving the Project Profile or EIA report<sup>23</sup>, the EIA subcommittee would study and review the Project Profile and the EIA reports. During the review of EIA reports, the Director of Environmental Protection and the ACE could request the project proponent to present and answer questions from the ACE EIA subcommittee members. The EIA subcommittee would draft the

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<sup>21</sup> According to the EPD website and press release

<sup>22</sup> As shown in the ACE meeting minutes

<sup>23</sup> As required by section 5 and 6 of the EIA Ordinance



recommendations and discuss them in the full ACE meeting. The ACE would then make the finalised recommendation to the Director of the Environment.

#### **4.4. Administration of the EIA**

The Environmental Protection Department (EPD) is the Authority to oversee the implementation of EIA in Hong Kong. EPD issues guidance materials for the administrative process and technical assessment in EIA practice while determining the broader environmental policies and objectives in Hong Kong. The EPD has routine communications among the key parties in EIA practices, through the User Liaison Group. During the EIA process, if the project proponent asked, the EPD would set up and Chair an Environmental Study Management Group (ESMG) to liaise and discuss among the authorities, project proponents and their consultants (if any). The ESGM served as a platform to exchange views and resolve conflicts (Environmental Protection Department, 2010b).

The EIA practice is mainly governed by the EIA Ordinance Register Office and the Environmental Assessment Division of the EPD. The EIA Ordinance Register Office serves as the statutory register<sup>24</sup>, it is the office administrate the submissions and application under the EIA Ordinance. The office is also accessible by public members for inspecting Project Profiles and EIA reports registered by the office, including the EIA reports produced before the legislation of EIA Ordinance<sup>25</sup>.

The Environmental Assessment Division is responsible for administering the application of the EIA<sup>26</sup>. The division is further divided into an Assessment and Noise Group, Strategic Assessment Group, Metro Assessment Group and Regional Assessment Group. The whole division has around 135 officers<sup>27</sup>. In practice, the division would coordinate with relevant parties about the technical assessment of the EIA, also review the submitted Project Profile and EIA report submitted before the public inspection.

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<sup>24</sup> As required by section 15 of the EIA Ordinances

<sup>25</sup> EIA report of public works projects after 1993 are mostly available. However, only in hard-copy, and the content presented in these reports varies.

<sup>26</sup> As described on EPD's website, available from [http://www.epd.gov.hk/epd/english/about\\_epd/history/history.html](http://www.epd.gov.hk/epd/english/about_epd/history/history.html)

<sup>27</sup> Based on the Hong Kong Government Directory, as in Oct 2017

#### 4.5. Requirements of Public Participation

Public Participation is (to a certain extent) both, a statutory requirement and administrative requirement by EPD. As mentioned in Section 4.2 and Figure 4.1, the EIA Ordinance stated that there are two statutory public inspection windows, one for the inspection of the Project Profile and one for the inspection of the EIA report. For some projects, EPD would require the project proponent to liaise with the stakeholders and community in the environmental permit, as part of the Environmental Permit Conditions.

##### 4.5.1. Public Inspection of Project Profile

The EIA Ordinance (section 5) stated that when the project proponent applies for an environmental permit or EIA Study Brief they would need to advertise the availability of the project profile in an English and a Chinese Newspaper. In current practice, the Director of Environmental Protection would place the project profile at the Register Office, two environmental resources centres (that are managed by EPD) and the relevant district councils<sup>28</sup>. Anyone could submit written comments to the Director of Environmental Protection within 14 days of its being advertised. It is a duty under the EIA Ordinance for the Director 'to consider any comments received in drawing up the study brief for the designated project' (quoted from section 5 of the EIA Ordinance).

##### 4.5.2. Public Inspection of EIA Report

The requirement of public inspection of the EIA report is similar to the requirement of the project profile but more detailed. As required by the EIA Ordinance, the Director of Environmental Protection would advise the project proponent to go for the public inspection, after the director decided that the EIA report meets the requirement of EIA Study Brief and Technical Memorandum. The project proponent would then require by the EIA ordinance to provide a sufficient number of EIA reports for the exhibition, advertise once every ten days of the 30 days public inspection period in a Chinese and English Newspaper. In the newspaper advertisement, the project proponent would need to state clearly the nature of the

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<sup>28</sup> EIAO Guidance Notes No.13/2010

designated project and the project site, and details about how a person could inspect and give comments on the EIA report. Like during the public inspection of the project profile, EPD would place the EIA reports at the Register Office, two environmental resources centre and the relevant District Councils (Environmental Protection Department, 2010a).

The statutory public inspection window is 30 days. It is a duty of the Director of Environmental Protection to have regard to the comments submitted by granting or refusing the application of the Environmental Permit. On the other hand, if the project is required to be presented in ACE meetings, the members of the ACE would receive a list of summarised comments before the meeting<sup>29</sup>.

#### 4.5.3. Stakeholder and Community Liaison

The Director of Environmental Protection and EPD encourage a project proponent to have early consultation with EPD, ACE, District Councils, Green Groups and other affected parties (Environmental Transport and Works Bureau Government Secretariat, 2003). It is not a statutory requirement for the project proponent to work on the 'early consultation', it is up to the will of the project proponents to decide whether or how they would adopt such initiatives.

However, since around 2004<sup>30</sup>, the Director of Environmental Protection may add a condition to the Environmental Permit that requires the Project Proponent to establish a platform to liaise with stakeholders and affected parties. The justification for having such measures and the objectives are not well documented or explained by the EPD. In an administration response presented to the Legislative Council, it only stated that EPD will *"stipulate in the environmental permit, according to the nature of the project, a requirement for the project proponent to strengthen the liaison with the affected residents and timely respond to residents' concern by setting up a Community Liaison Group (CLG), a telephone hotline and holding regular meetings"* (Hong Kong Government, 2015, page 4). The detailed requirements of the stakeholder/community liaison vary and are on a case by case

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<sup>29</sup> Reported in ACE meeting minutes.

<sup>30</sup> Base on desktop screening through the Environmental Permit on EPD's website

basis. Some of the permits only require having an office or hotline established, some require a formal liaison group to be established with the regular meeting. Usually, if a formal liaison group is required, the composition of the group would require to be agreed and endorsed by the EPD<sup>31</sup>. Besides this requirement, the project proponents would have quite a high degree of flexibility to determine the operation of these liaison groups, such as the format and agendas.

#### 4.6. Practical Issues in the EIA and Public Participation Practice

By the end of July 2018, a total of 215 EIA were approved under the EIA Ordinance (Environmental Protection Department, 2018). Among the approved projects, there are a large variety of types with regards to the scale, nature and project proponent, from road improvement, water treatment plants to strategic planning/rezoning projects<sup>32</sup>. The EIA process in the practice of these project could be very different, as the nature, scale and extent of environmental impact vary as much as the projects themselves. Such kind of variations has many implications on EIA, especially with regards to the following three aspects:

The duration of the EIA process varies a lot. A relatively small-scale project like *Road Works at West Kowloon* in 2009 took less than one year between the submission of the project profile and approval of the EIA report. A large-scale project like the Shatin to Central Link took almost ten years to get all the relevant EIA reports approved since the first submission of project profile<sup>32</sup>. There is no study or official documents explaining the long duration between the first submission of the project profile and EIA approval for some of the projects, it is more likely due to changes in the project design and elements. For example, the Shatin to Central Link first submitted a project profile in 2002, but then submitted two additional project profiles in 2004, three more in 2008, one more in 2010 and one more in 2011<sup>32</sup>. The number of project profiles reveals the changes of the project elements, especially those related to the designated projects under the EIA Ordinance. As such, the nature, scale and extent of environmental impacts could

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<sup>31</sup> Base on screening through the Environmental Permits

<sup>32</sup> Refers to information the EIA Ordinance Register Office Website, available from <https://www.epd.gov.hk/eia/english/register/aeiara/all.html>

change during the EIA process, and potentially the number and location of the affected population. However, there are also EIAs that took a long time but did not submit any revise or additional project profile. For example, *Proposed Low-rise and Low-density Residential Development at Various Lots and their Adjoining Government Land in D.D. 104, East of Kam Pok Road, Mai Po, Yuen Long. New Territories* project submitted the project profile in 2009 and then submitted the EIA report in 2016. There wasn't any news about the EIA in that period.

Since the EIA Ordinance mostly regulates the EIA related applications and the submission of documents, how these documents are being prepared would depend on the project proponents and their project managers. Different project proponents may have different environmental and social policies on dealing with environmental issues and public enquiries. Public works projects would need to follow the government's policy at that time and the relevant technical circulars. For example, the Environment, Transport and Works Bureau Technical Circular (Works) No.13/2003. Ref: ETWB(W) 271/32/103 guided the procedures and approaches in conducting EIA of government proposal and public work projects (Environmental Transport and Works Bureau Government Secretariat, 2003). Private project proponents do not necessarily follow the same approach and may have their approaches for EIA and handling the public enquiries.

Moreover, the different projects would have different public participation windows and processes in addition to the public participation in EIA. Some types of the project would have another statutory process in parallel to EIA, especially those included zoning or rezoning of plans, which would be regulated under the Town Planning Ordinance of Hong Kong and require to follow the planning process<sup>33</sup>. The Town Planning Ordinance has a statutory requirement that all of the drafted New or Amended Outline Zoning plan would require to conduct a public inspection during the planning application, adding more windows for the public to comment on the project. Besides the other statutory requirements, project proponents would conduct additional public engagement activities during the

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<sup>33</sup> Full text of the Town Planning Ordinance is available from <https://www.elegislation.gov.hk/hk/cap131> (Accessed 23 Sep 2018)

project developments. For example, the strategic planning projects (e.g. Tung Chung New Town Extension project) by the Planning Department and Civil Engineering and Development Department would have stages of public engagement activities besides the statutory procedures. The availability and nature of these windows are, however, subject to the will of the project proponents.

#### **4.7. Political and Social Context**

The EIA Ordinance was drafted and passed during the British colonial government. Then, it came into effect and was implemented after the resumption of Chinese sovereignty. The Joint Declaration (formally known as *Joint Declaration of the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of the People's Republic of China on the Question of Hong Kong*<sup>34</sup>) stated that the law in force in Hong Kong “will remain basically unchanged”. Although the EIA Ordinance has remained basically unchanged during the last twenty years, the political and social contexts have undergone many changes, influenced by different actors in society. Among all, the dispute on civil and political rights (in particular among the higher educated and younger generation (see e.g. HKU Public Opinion Programme, 2015) remain a critical political problem among the Hong Kong society, also between the Hong Kong society and the Chinese government<sup>35</sup>. This distinct political and social struggle have an inevitable impact on the EIA and public participation practices, which are explained below.

##### **4.7.1. Political Context**

The political system of Hong Kong is viewed as an example of illiberal democracy since its days as a British Colony, which the term “illiberal democracy” generally means elections are held rarely as free and fair as in the liberal democracy system, but they reflect the popular participation in politics (Zakaria, 1997). As of to-date (2019), the Chief Executive of Hong Kong is elected by an election committee and forty out of the seventy legislative council members are elected through universal

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<sup>34</sup> The Joint Declaration <http://www.cmab.gov.hk/en/issues/jd2.htm>

<sup>35</sup> As reflected in the ‘Umbrella Movement’ in 2014, and the large scale democracy protests in 2019.

suffrage (Hong Kong Government, 2019). The election system reflects the restrictions of overall political rights of Hong Kong citizens. Under this political structure, there are two prominent characteristics. First, the Chinese government seeks to exert constitutional rights and political power over the Hong Kong government (see Goodstadt, 2000; Ortmann, 2015; Lam, 2015). Second, as also an effect of the Chinese exertion, there has been growing corporatism in Hong Kong's political realm. After the Joint Declaration, the colonial government introduced the 'Functional Constituencies' to the legislative council to gain support from the corporate elites for the preparation of sovereignty transition. After the resumption in 1997, the co-operation strategy of Beijing led to formalization and institutionalization of the corporatist state. The sectoral groups have gained privileged access to power, resulting in sector-oriented resource allocations and policy initiatives (Ma, 2017). Ma (2017) found that government policy and budget allocations favour sectoral interests, which included new government bodies to push infrastructural development.

The illiberal nature of the political system means that the administration and top government officials play a dominant role in the legislation and policy initiatives, in which they determine the policy priority (Leverett *et al.*, 2007). Also, by this dominance of power, it shows a priority of the interests of the Chinese government and the business sectors (Goodstadt, 2000; Ma, 2017). The influence of this dominance in EIA practices is not well documented. However, there are two indications of such influence. First, the administration has the final decision to the EIA set up as in the bill<sup>36</sup>. Among all of the EIA mechanisms, the discussion of including the Third Party Merit Appeal showed the stance of the administration at that time. The Third-Party Merit Appeal was proposed by various submissions during the consultation of the Bill; however, the administration decided to not include such mechanism in Hong Kong's EIA setting as to avoid the potential third party grievances and its potential impact to the project programme<sup>37</sup>. Second,

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<sup>36</sup> See the meeting minutes in Legislative Council archive. Bills Committee to study the Environmental Impact Assessment Bill

<sup>37</sup> The summary of this response could be found on document CB(1)413/96-97(01) Paper No. 14 of the Bills Committee to Study the Environmental Impact Assessment Bill Proposed Mechanism for Third Party Appeal

there are sectoral interests in policies and project priorities. Noting that EIA was primarily set up to control the environmental impact of major infrastructures and plans, the Hong Kong government plans, finances and oversees the buildings of most infrastructure projects (Lam and Brown, 1997). There are voices in the engineering sector that environmental preservation needs would slow down construction works (Ma, 2017). The set up of the Development Bureau was one of the responses from the Chief Executive regarding this concern (promised in the election and implemented in 2007) (Ma, 2017). Although so far there has been no evidence about the interference of the Development Bureau on the implementation of the EIA, it still reflects the stance of the Hong Kong higher official in pushing forward the infrastructure projects in favour of the sectoral interests.

Recalling that the content of the EIA Ordinance has remained mostly unchanged in the last 20 years (in comparison, the EU EIA Directive had been updated four times in the meantime). It shows that the illiberal systems uphold against the pressure from both those wanting to loosen the standard and strengthen the standard in development control. While the EIA Ordinance remains mostly unchanged, the increased political-social conflicts among mainland China, local business and the members of the public have grown more acute in the recent years, which poses a challenge in the wider environmental management in Hong Kong. Section 4.7.3 provides more details on this subject.

#### 4.7.2. Social Context

Hong Kong's social context is shaped by the emerging local issues and the wider restrictions in the illiberal democracy political system. Since the days as a British Colony, there have been democracy movements in Hong Kong, calling for universal suffrage and transformation to full democracy (Lo, 1997). During the last twenty years, the first prominent milestone was the mass protest in 2003. It is estimated that around 500,000 participated <sup>38</sup>. Protests with calls for democracy have been

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<sup>38</sup> The estimated number varies from source, the number of around 500,000 was estimated by researchers of the universities, see <https://app3.rthk.hk/mediadigest/content.php?aid=185> (accessed 29 Dec 2019)



held every year, and later developed into the Umbrella Movement in 2014 and the recent full-scale democracy movement starting in 2019. These large-scale social movements reflect the development and characteristics of civil society. Especially during the last decades, Hong Kong's civil society has shifted from a relatively passive defender role to a more active defender of its values and autonomy. (Chan and Chan, 2017).

There are two major characteristics of Hong Kong's civil society and social movements. The first one is that the unsatisfactory perceived political performance shaped mass support on democracy, and such perceived political performance tends to have a stronger effect than the economic performance, which made offering 'economic sweeteners' alone inadequate to suppress such support (Sing, 2010). At the same time, the support of democracy is met with constraints of the overall illiberal system that the political power is dominated by the Chinese government and business sectors. It has created a combination of hope and frustration towards the political development process (Lam, 2015). As a result, civil movements seek to develop new forms and extent to different sectors. For example, the Umbrella movement in 2014 complied with actions from the political parties, students groups and local community groups, with actions from parliament, roadblocks to economic and local cultural actions (Lam, 2015; Chan, 2015; Chan and Chan, 2017).

The second characteristic is that the development of the civil society embedded the changes in the identity of the Hong Kong people during the transitional period. Since the hand over in 1997, there has been a struggle of ethnical identity among the Hong Kong population (see PORI, 2019). The Chinese government attempted to inculcate a sense of belonging in the Hong Kong people. However, such attempts failed and backfired (Yew and Kwong, 2014). There has been an increase in "Hongkonger" identity since 2008. In the latest (Dec 2019) survey, the percentage of the population who identified themselves as "Hongkonger" or "Hongkonger in China" reached a total of 78% (PORI, 2019). This struggle of identity is associated with various geo-political, geo-economic factors among the Chinese government (including the illiberal nature of the political system), Hong Kong government and

the Hong Kong people (Yew and Kwong, 2014). It makes policies that involve conflicts of interest or value between mainland China and Hong Kong sensitive subjects and has created political tensions around it. The “Hongkonger” identity is especially strong among the younger generations, who emphasize Hong Kong’s civic and political freedom and actively resist the ruling from the Chinese government (Ortmann, 2015). For example, an Anti-national education movement took part in 2011 to resist the Hong Kong government efforts to strengthen national education. The movement started by a group of secondary school students and developed into a series of collective civil actions involving parents, educators and supporters among the general public (Chan and Chan, 2017). It shows that such identify struggle and tension have created drives the civil society to take actions to defend their believes and values.

#### 4.7.3. Implications for the EIA and Public Participation practices

There are limited studies about how the above described political and social context would affect the implementation of EIA and the public participation practices in it. However, there are observations about the implications on the general interaction between the civil society and government, including the policy and project decisions-making.

While the civil society in Hong Kong has been active and taking collective actions like demonstrations, rallies and petitions, environmental issues are not one of the more popular subjects in these actions, which only consist of 1 to 6 % of these actions each year (Chan and Chan, 2017). However, as EIA is applied to infrastructure projects, these infrastructure projects do not only attract environmental concerns. Some of them are intertwined with geopolitics and the underlying politically and socially sensitive subjects in Hong Kong. The Express Rail Link (XRL) is one of the more prominent examples. When the anti-Express Rail Link movement broke out in 2009, the discourse started with lands and destruction to the local community, then it changed to the challenges on the economic performance and wealth benefit distributions which successfully mobilized supports from the members of the public (Xia, 2016). It later also became intertwined with the controversy of the threats on Hong Kong’s autonomy and use

of mainland China's law in Hong Kong (e.g. see HKFP, 2018). The conflicts among the general public, Hong Kong's sectoral interests, Hong Kong government and Chinese government were observed in many other regional infrastructure projects, such as the Hong Kong – Zhuhai -Macao Bridge (e.g. see Yang, 2006; Blackledge, 2016) and the Expansion of Hong Kong International Airport (i.e. Third Runway) project (e.g. see Siu, 2015).

Moreover, the political and social context affect the overall interaction between civil society and the Hong Kong government. As an illiberal democracy political system, the attitude on public engagement civil society partnership is determined by high officials in the Hong Kong government, and it changes as the Chief Executive changes (Chan and Chan, 2017). Meanwhile, there has been discontent against the illiberal political system that is dominated by the Chinese government and sectoral interests and calls for democracy reforms (Lam, 2015; Ortmann, 2015). Studies on public participation in Hong Kong found that members of the public have low trust towards the government, experts and business sectors with regards to environmental policy and governance. (Tsang *et al.*, 2009; Walker and Hills, 2014). Tsang *et al.*'s (2009) study found that public trust in the Hong Kong government's decision making was eroded by perceived incompetence and lack of fiduciary responsibility. Experts and consultants were accused of conflicts of interest; and, there was a perception that the government has vested interest with business sectoral interest. In addition to that, Walker and Hill's (2014) study point out that the general low trust and scepticism are in the form of rejection or cynicism. The environmental governance and decision-making in Hong Kong echo the wider political and social context. It shows that EIA and the public participation practices are shaped by the political atmosphere and share all the struggle and conflicts beneath.

#### **4.8. Overview and summary**

Since the EIA Ordinance came into force in 1998, EIA in Hong Kong has been effectively applied to most of the major infrastructure and planning projects. The establishment of Hong Kong's EIA system mainly comes from the EIA Ordinance, which outlines the statutory process with the authorisation of power and binding

of duty. The Ordinance authorises the Director of Environmental Protection to consider the EIA and approve the EIA report and environmental permits, while recognising the Advisory Council on the Environment as the advisory body to be consulted before the approval decisions. The Technical Memorandum under the EIA Ordinance further stipulates the environmental criteria and guidelines on the technical assessment.

At the administrative level, the Environmental Protection Department (EPD) oversee the implementation of EIA. The EPD would issue guidance notes and would liaise with the project proponents to ensure the EIA requirements are well understood. The EIA Ordinance Register Office is the dedicated office to handle EIA related applications, which also archive the EIA documents for public access.

Regarding public participation, two public inspection windows are required under the EIA Ordinance, one for the review of the project profile and one for the review of the EIA report. The Director of Environmental Protection is required under the EIA Ordinance to consider the comments received before making decisions. In addition to the two statutory public inspection windows, stakeholder and community liaison may be required as part of the environmental permit conditions.

In practice, many other issues affect the EIA process. The difference in nature, scale and project proponent among the EIA have much implication on the EIA and overall public participation process. It includes the duration of EIA, which may be associated with changes of project elements during the EIA preparation; project proponents would have different approaches for EIA and public participation; and, projects follow different statutory procedures and public engagement in parallel to the EIA process.

Although there has not been any significant change to the EIA legislation or the statutory requirements, the underlying political and social context have changed over the last 20 years. Hong Kong is viewed to be an illiberal democracy system that elections and public participation are conducted, but citizen's rights are limited. With the discontent of political performance and urge for democratic reforms, the civil society in Hong Kong has increased tension with the Hong Kong and Chinese government. Inevitably, the EIA and public participation practise are

influenced by such contextual background, and the public's concerns echo with the wider political and social discourse.

## **5. PUBLIC PARTICIPATION IN THE PREPARATION OF THE EIA REPORT**

Chapters 5 to 8 follow on from Chapter 4 and discuss empirical evidence resulting from the investigation and examination of the public participation practices in the EIA process. This chapter focus on public participation practices during the preparation of EIA reports.

A project triggers the EIA process by submitting the Director of the Environmental Protection Department. The public inspection of the project profile is the first statutory public participation window. As was explained in chapter 4, depending on the project scale, management and other factors, the preparation of EIA reports may take one year to more than ten years. During this period of preparation time, there could be additional public participation windows, which would depend on three major factors:

1. First, if there are significant changes to the project elements (e.g. location or scale), the project proponent would be required to apply for a new Study Brief, and public members can give another round of comments regarding the new project profile.
2. Second, the public can participate in other windows if the project triggers another statutory process that requires public participation. Mostly, it refers to a project that requires making a planning application in parallel to the EIA process, such as changes to the outline zoning plan, plot ratio or require an additional permit(s). In these cases, public members could submit comments to the Town Planning Board or attend a hearing during the public inspection window in the planning process.
3. Third, there may be additional participation opportunities offered by the project proponents. Some project proponents would invite concerned parties and local stakeholders for meetings. The formats and settings vary from project to project, from exhibition booths, workshops to regular liaison meetings.

In this chapter case studies are introduced to elaborate on how the preparation of the EIA report would be affected by public participation activities.

### 5.1. Data Collection and Analysis

Comments received by the Director of Environmental Protection are deemed confidential and not open for public access. Therefore, the available data would mostly rely on green groups that release their comments on the public domain, and gist/summary of concerns released by the project proponent. With the selection criteria explained in Chapter 3, The *Tung Chung New Town Extension* project is selected for analysis, mainly based on active public participation activities, the availability of information and a relatively transparent process that reflects important issues.

The *Tung Chung New Town Extension* project is a strategic planning project that aimed to extend the existing Tung Chung New Town with a proposed reclamation works for about 130 hectares, Site formation works of 10 hectares, De-channelize portion of Tung Chung Stream and other Civil Engineering Works (Development Bureau and Civil Engineering and Development Department, 2017). During the EIA study, the project involved three stages of public engagement exercises in parallel.

The case study analyzed the concerns raised by the green groups during the public inspection of the project profile, and then trace how these concerns influenced the preparation of the EIA report. The public engagement reports of the project would also be used to examine whether or how these concerns are taken into account in the EIA and project design.

### 5.2. Case Study: Tung Chung New Town Extension

The *Tung Chung New Town Extension* is a public works project that was jointly commissioned by the Planning Department (PlanD) and the Civil Engineering and Development Department (CEDD) since 2012. The project is a designated project as the involved population size and proposed engineering works fall within the description of the Schedule 2 and Schedule 3 of the EIA Ordinance<sup>39</sup>.

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<sup>39</sup> As shown in the Project Profile, Ref: ESB-251/2012, ESB-283/2014, ESB-285/2015, Schedule 2 and 3 of the EIA Ordinance stipulate the detailed definition of designated project.

### 5.2.1. Project Elements

Tung Chung New Town is a residential/commercial district that started in the 1990s; the project consists of an extension of the existing New Town to the Northeast and Southeast by constructing a total of 160 ha of land through reclamation and develop 125 ha of existing land. The proposed reclamation area is in the middle of the Existing North Lantau Highway and the Hong Kong International Airport/ Boundary Crossing Facilities (currently under construction). The land formation works are mainly in the Southeast area that covers the existing rural villages' areas and the adjacent lands of the Tung Chung River and Bay.

The original project profile submitted in 2012 did not specify many details. In the revised project profiles in 2014 and 2015, some other project elements and associated works were added, including new roads, new sewage pumping stations, a marina, petrol filling station, waterfront promenade and de-channelization of the Tung Chung Stream. Some of these additional project elements were influenced by the public participation exercises. Nevertheless, in the beginning, it could be viewed as a reclamation and land formation project.

### 5.2.2. Environmental Concerns

When the project was announced, seven green groups (ie. Designing Hong Kong; Eco-Education and Resource Centre; Green Lantau Association; Green Power; Hong Kong Bird Watching Society; The Conservancy Association; WWF-Hong Kong) submitted a joint statement "*Joint Green Groups' Statement on Protection and Conservation of Tung Chung River, Estuary, Coastal Areas and Associated Habitats*" regarding their concerns to the potential environmental impact induced by the projects. The major concerns are the ecological impact at Tung Chung River, Tung Chung Estuary/Bay, and Tung Chung Valley (Green Power *et al.*, 2012) .

The green groups emphasized that the Tung Chung River, it's Estuary/Bay and the adjacent valley are one of the remaining natural streams in Hong Kong, providing a wide variety of habitat and having a high ecological value. According to the survey done by the green groups, the Tung Chung River is rich in freshwater fish species. Its riparian zones are habitat for 25 amphibian and reptile species, including species



that are protected by legislation. At least 48 butterfly species could be found in Tung Chung's remaining natural habitat. The Tung Chung Estuary is home to various mangrove and animal species, including horseshoe crab and pipefish, the Tung Chung Bay is a nursery area for commercial fisheries, and the Tung Ching Valley is covered with Fung Shui Woodlands<sup>40</sup> and secondary woodlands with conservation values (Green Power *et al.*, 2012).

Besides criticisms regarding the Tung Chung River, concerns of the potential disturbance to the Chinese White Dolphins population and marine park nearby, regional noise impact, and regional air quality were also raised in the study (Development Bureau and Civil Engineering and Development Department, 2012).

### 5.2.3. Submission and Requests

The public inspection of the project profile started slightly later than the Stage 1 public engagement which was done separately by the project proponent (ie. PlanD and CEDD), with the Stage 1 Public Engagement Exercise consulting the green groups in June 2012<sup>41</sup> and the Project Profile released in July 2012. At this stage, very few details were released, which the Stage 1 Public Engagement Exercise only aimed at collecting general opinions on the feasibility of the development in the region (Development Bureau and Civil Engineering and Development Department, 2012). With reference to the Stage 1 public engagement report, the issues raised by the green groups in their meetings with the project proponents are similar to the above mentioned joint statement and the open submission to the Director of Environmental Protection.

As mentioned earlier, the major concerns are the ecological impact of the Tung Chung River, Estuary/Bay and valley. In addition to the joint statement, Green Power (2012) (one of the green groups that co-signed the joint statement) submitted some more detailed comments to the Director of Environmental Protection that also included comments regarding the air quality, water quality, urban greening and other relatively minor environmental issues. In summary, the

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<sup>40</sup> Fung Shui Woodland in Hong Kong mostly refers to natural woodland adjacent to rural village that the local residents believe that would bring them fortune or good luck.

<sup>41</sup> Information from the Appendix F of the Stage 1 Public Engagement Report

comments that included in the joint statement and the additional submission by Green Power could be divided into three parts: i) In-house survey results about the concerned species that support the argument that the region has high ecological conservation value; ii) Other environmental issues requested to be addressed in the EIA and, iii) Request for changes to the project/planning designs. Appendix 5.1 and 5.2 give a summary of the queries submitted to the Director of Environmental Protection.

#### 5.2.4. Initial Response

The queries and requests submitted to the CEDD (during the Stage 1 public engagement exercise) and the Director of Environmental Protection are similar. The comments submitted to the Director of Environmental Protection are more detailed. The initial responses from the project proponent and the Director of Environmental Protection are described below.

Referring to the Stage 1 Public Engagement Exercise Report, CEDD did not provide a solid response to the environmental concerns or the environmental queries submitted by the green groups (and other individuals/organization that raised similar issues). In the report, it only stated that

*“The possible impact of development on the ecologically sensitive areas and the environment, such as on air quality and residential dwellings will be critically assessed and minimised, e.g. in the Environmental Impact Assessment. Areas proven to be ecologically sensitive will be protected against undue influence/disturbance.”* (Development Bureau and Civil Engineering and Development Department, 2012)

The response specifically mentioned EIA and that the “prove’ it gives should determine whether and where the areas would be protected.

On the other hand, the Director of Environmental Protection does not respond directly to the comments received. However, clues can be found in the Study Brief, which the Director of Environmental Protection is required to consider and accommodate relevant comments into the instructions illustrated in the Brief.

In general, most of the technical and assessment related comments that were submitted by the green groups (As shown in Appendix 5.2) were responded to. Especially for the ecological assessment, the Study Brief requested the project proponent to conduct a survey to investigate and describe the wildlife groups and habitats in the study area. Many of the species that were identified by green groups (as in Appendix 5.1) are specified in the assessment requirement, including species that are not protected by Hong Kong's existing legislation, for example, Short-legged Toad, Beijiang Thick-lipped Bard, Swonhoe's Egret and horseshow carb species mentioned. However, the comments that are less related to the technical assessment were not responded to. The Study Brief has no mention about the adoption of WHO's New Air Quality Objective<sup>42</sup> or means to reduce the urban heat island effect. Table 5.1 presents further details of the response in the Study Brief.

**Table 5.1 Summary of Response to Queries Shown in the Study Brief**

<b>Environmental</b>	
<b>Aspect</b>	<b>Respond</b>
General	<p>The EIA study is required to recommend possible and practicable measures to avoid, minimize and/or compensate for the adverse environmental impact.</p> <p>As for the ecological assessment, the project proponent was required to access (but not limited to) 'a development option that requires no reclamation in Tung Chung Bay' and 'a development option that excludes large-scale development in the Tung Chung River Valley.</p>
Ecological Impact	The project proponent was required to conduct a survey to investigate the ecological value of the area (Including most of the species listed in Appendix 5.1.
Fisheries Resources	The project proponent was required to predict and evaluate any impacts on fisheries

<sup>42</sup> The Air Quality Objectives that adopted by the EIA at that time was established in 1987, which are much loose than the WHO Air Quality Object updated in 2005. The Air Quality Objectives in Hong Kong was later updated in 2013 and have more stringent requirement on the pollutant concentration; however, still not as stringent as the WHO target level.

Air Quality	Did not mention the Air Quality Guidelines by the World Health Organization, the project proponent only need to meet the existing Air Quality Objective in the Hong Kong legislation.
Water Quality	The project proponent was required to assess the Water quality impact due to construction activities and other projects in the vicinity.
Landscape	Neither the urban heat island effect nor the slope safety was required to be assessed in the Study Brief.

It is not possible to claim that the requirements shown in the above table would not be included if the green groups did not submit the comments. Nevertheless, under the requirement of the Technical Memorandum, the project proponent is required to assess all the relevant environmental impact that it applies. The requests on conducting assessments on the urban heat island effect and slope safety were rejected, probably because these two issues are not in the technical framework in current EIA practice.

Regarding the ecological impact, the Technical Memorandum stated all species with conservation interest should be assessed, no matter whether the species are covered in Hong Kong's legislation or not. Despite that, it is clear that the findings submitted by the green groups had impacted the assessment framework in the EIA. The project proponent was required to conduct a detailed survey to verify the claims about the ecological value in the area, and cover all the listed species of conservation interest.

#### 5.2.5. The Project Development

After Stage 1 Public Engagement Exercise and the commencement of the EIA study, the project proceeded to propose development options that form the basis of Stage 2 Public Engagement Exercise. Before the Stage 2 Public Engagement Exercise activities during May 2013 to July 2013, materials and information about the planning and engineering considerations, planning principles and initial land use options were updated and released for public assessment (Development

Bureau and Civil Engineering and Development Department, 2013). From the environmental point of view, it did not give much more details than during Stage 1; the submissions from the green groups were also similar. According to the Stage 2 Public Engagement Report, the major concerns submitted by the green groups were still focused on the ecological conservation at the Tung Chung River and Bay.

As a response to the comments received from the CEDD (the project proponent), it was mentioned that they have the same vision in protecting the natural environment and preserve the ecological value of the Tung Chung River, Estuary and Bay. Coastal Protection Area and Conservation Area had been designated as the environmental protection measure. The reclamation option at Tung Chung West was abandoned. Also, it stated that *“a comprehensive EIA Study is being conducted in parallel with the Study in confirming/detailing the conservation boundaries for the new town extension area and to ensure that the impact of the development can satisfy the corresponding statutory criteria, such as air quality, noise, water quality and ecology”* (Development Bureau and Civil Engineering and Development Department, 2013).

The details of the process and rationale that was adopted in drafting the Recommended Outline Zoning Plan (RODP)<sup>43</sup> are not transparent; therefore, there is no solid evidence about whether the abandonment of the reclamation development option was due to the environmental study, the objections of the public members or some other reasons. However, it was clear that EIA played a role in shaping land use planning. The technical assessments provided the necessary information to verify the claims from the green groups and public members and determine the appropriate planning actions.

Stage 3 Public Engagement Activities were conducted from August 2014 to October 2014. A drafted RODP was released for public members to comment on. The drafted RODP provided a lot more details than at Stage 2. As such, the discussion

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<sup>43</sup> A RODP is the product of the planning study, which would also be the zoning plan that used for the EIA report submission. The RORP outline the recommended landuse zoning that agreed by the Development Bureau, CEDD and PlanD at that time. However, the RODP is not necessary the final decisions on the zoning, details could still be revised during the detailed design and implementation stage.

on environmental issues was more detailed. The Stage 3 Public Engagement Report (Civil Engineering and Development Department and Planning Department, 2014) shows that there are quite a lot of in-depth discussions about ecological conservation along with many other environmental related issues, including the resumption of lands, sewage and drainage, and cumulative impact with concurrent projects. As with the conservation in Tung Chung West, which was still the major concerns, CEDD and PlanD stated that they shared the same planning vision about the conservation of the natural environment, adding that appropriate planning measures (Coastal Protection Area, Conservation Area and Green Belt) had been proposed in the RODP. Also, a river park and buffer zones were proposed to protect the ecologically sensitive area.

#### 5.2.6. Outcomes

The EIA report of the project was submitted to the Director of Environmental Protection and released for public inspection in December 2015. Following the Study Brief) the technical assessment mostly covered the response outlined in Table 5.1. The reclamation option and large-scale development option at Tung Chung West were dropped in the planning study much before the EIA report submission (and therefore not mentioned in the EIA report). The requirement for the ecological, fisheries and water quality are fulfilled. The request on using WHO updated guideline for Air Quality Assessment criteria was partly responded to, mostly due to the update of the Air Quality Objectives by the Environmental Protection Department in 2013 (see Remark 7).

For the ecological assessment, the submissions from the green groups during the Project Profile stage did have a clear impact on the assessment result. First, as stated in the EIA report (Section 9.3.1.3 and various Section in 9.4 of the EIA report) the survey information submitted by the green groups were included in the assessment findings. For a deeper analysis, Appendix 5.3 follows the highlighted species in Appendix 5.1 and examine the assessment and actions taken.

Appendix 5.3 shows that almost all of the concerned species were addressed by avoiding the development of that area or implementing compensation measures.

Residual impacts were expected to be minimized. Meanwhile, the comments submitted by the green groups are hereby described for cross-examination.

Referring a joint green groups submission<sup>44</sup>, the green groups generally appreciated the development plan, which avoided development at many of the ecologically sensitive areas, the proposal of the river park and revitalizes some of the channelized section. However, the joint green groups would have liked to extend the area of the river park and remained concerned about the residential development at Tung Chung Valley, with regards to it affecting the natural landscape and risk of flooding in the area. In separated submissions, The Conservancy Association expressed concern over the lack of details about the woodland compensation planning and monitoring<sup>45</sup>; The Hong Kong Bird Watching Society commented that the indirect impact of the village type development on the habitats was underestimated<sup>46</sup>; Green Power commented that there are uncertainties about whether water quality objectives were sufficient to support the aquatic life in Tung Chung River, also expressed their concerns of the potential illegal dumping and vandalism in the area. For other environmental issues, the regional air quality, cumulative impacts to the nearby marine park and Chinese White Dolphin population due to concurrent project were also mentioned.

While no major opposition to the development plan, the green groups were not entirely satisfied with the outcome. It is worth noting that besides the queries about the planning visions, almost none of the Project Queries that are listed in Appendix 5.2 are addressed in the EIA. The attitude of the green groups has significantly softened through the three years of EIA and Planning study, and seems

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<sup>44</sup> By Designing Hong Kong, Eco-Education & Resources Centre, Green Lantau Association, Green Power, Hong Kong Bird Watching Society, Hong Kong Outdoors, Lantau Buffalo Association, The Conservancy Association, WWF (HK), available from [http://www.greenpower.org.hk/html5/eng/job\\_environment\\_04.shtml](http://www.greenpower.org.hk/html5/eng/job_environment_04.shtml) (Accessed 20 Jan 2018)

<sup>45</sup> Available from <https://www.cahk.org.hk/images/upload/files/EPD20151231%28TC%29.pdf> (Accessed 20 Jan 2018)

<sup>46</sup> Available from [http://www.hkbws.org.hk/web/eng/documents/conservation\\_submissions/EIAO\\_Cap499/20160101\\_TC\\_EIA\\_HKBWS.pdf](http://www.hkbws.org.hk/web/eng/documents/conservation_submissions/EIAO_Cap499/20160101_TC_EIA_HKBWS.pdf) (Assessed 20 Jan 2018)

to accept that the reduced development area, a river park and buffer zones are compromised outcome.

### 5.3. Common Submission and Queries

The *Tung Chung New Town Extension* case study is one of the most notable examples of the potential influence that public participation could have in the preparation of EIA, including shaping the technical assessment framework and identification of appropriate actions. The major green groups in Hong Kong, i.e. the above mentioned Green Power, The Conservancy Association, Hong Kong Birds Watching Society and WWF(HK) submitted comments during the public inspection of Project Profile, mostly if the project is located in an ecologically sensitive area. However, such kind of detailed submission is uncommon. Rather, it is more common to see submissions that target specific area or species of concern. The section below provides the picture of some more generic submission and queries in other cases; however, it should be stated that the comments received by the Director of Environmental Protection are deemed confidential, the cases presented are limited to those release their comment in the public domain.

#### 5.3.1. Objection to the project or part of the project

Voicing out an objection to the project is a common theme that could be found among the submissions; however, this tends to be indirect and subtle. The *Tung Chung New Town Extension* project explained above is one of the few examples that the green groups did include a request of terminating the planning study. Even for some more controversial project, such as the Expansion of Hong Kong International Airport into a Third-Runway System project, the comments submitted by the green groups did not directly mention their objection to the project, while their stance was clearly presented in some other public releases (such as WWF (Hong Kong), 2012). The comments they submitted were more technical bases, despite that they do bear a tone of objecting to the project. For example, in Green Power's submission<sup>47</sup>, they requested the EIA to include the 'No-

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<sup>47</sup> Available from Green Power's website:  
<http://www.greenpower.org.hk/html5/eng/concern.shtml> (Assessed 27 Jan 2018)



development' option in parallel to evaluation with airport expansion and reclamation option. In Friends of the Earth (Hong Kong) submission to the same project<sup>48</sup>, while they requested CO2 emission to be assessed in the EIA, it also added that the CO2 emissions the project would lead to were unjustified and contradicting the Hong Kong policy of CO2 emission reduction. The comments submitted by the green groups, therefore, seem aimed at pushing for technical assessments that could prove that the environmental impacts of the project were unacceptable.

In cases where the environmental issues were are controversial, comments often focus on certain project elements. Similarly, the comments may not necessarily clearly state that they object to that project element. For example, Green Power's submission to the Tuen Mun Western Bypass project profile commented on the construction method of the land tunnel. They disagreed that drill and blast with explosives be used, concerning the vibration impact to the nearby sensitive receivers and the geological stability. The comments were made in some more technical terms that mostly criticised the lack of assessment and mitigation measures proposed in the Project Profile<sup>47</sup>. In the Conservancy Association's comment on Mai Po Nature Reserve Infrastructure Upgrade Project Profile, they requested that the EIA to justify the widening of the existing footpath, evaluate options to minimize its scale and address the potential ecological impacts. It is obvious that they disagreed with this project component and wanted to get rid of it.

### 5.3.2. Impose restrictions on the project

Another common type of comments that could be found is about imposing restrictions on a project or to introduce more stringent control of the development. There are three major types of restrictions or development control. The first type requests a direct control, such as to request prohibition of works or activities at a certain area, or certain activities to be conducted. For example, the in the *Tung*

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<sup>48</sup> Available from Clear the Air's website: <http://news.cleartheair.org.hk/wp-content/uploads/2012/07/EIA-FoEs-comment-to-HKAA-project-profile-final.pdf> (Accessed 27 Jan 2018)

*Chung New Town Extension* project explained in Section 5.2, the comments included a request of prohibiting civil engineering work, channelization and reclamation in Tung Chung River courses, banks, estuary and Bay. Another similar case is in Green Power's comment Siu Ho Wan Station and Siu Ho Wan Depot Replanning Works Project Profile include comments about prohibiting new roads to be constructed to connect with any locations in Tai Ho Wan south of North Lantau Highway in order to protect the natural environmental at Tai Ho Bay<sup>47</sup>.

The second type is a policy or administration-based restriction and control. An example is a comment requesting the project to have no net loss of Biodiversity and any threat to the survival of concerned species; and, establish a system of protected areas to conserve biological diversity and develop guidelines for selection, establishment and management of protected areas in the Town Chung New Town Extension project. Another example is Green Power's comment on Siu Ho Wan Station and Siu Ho Wan Depot Replanning Works, which includes a request to promote green transportation tools to reduce the emission of air pollutants. Comparing to the first type, these requests concerns a longer term of environmental protection or enhancement, which is not associated with specific activities or works.

The third type of development control is project management or impact mitigation based. For example, in submission to the Hong Kong Offshore LNG Terminal Project Profile, Green Power commented that the lighting of the project sites at night should be directed downward to avoid light pollution<sup>47</sup>. This type of requests is focused on specific issues, but not as strong as those in the first type. It mostly refers to the minimizing of residual impacts induced by the project.

### 5.3.3. Additional assessment of specific issues

Submitted comments usually included queries about the predicted impact of the area of concerns, and request the EIA to include additional assessments to provide information or address these concerns. However, as explained in Section 5.3.1, sometimes requesting additional assessment may have a hidden agenda that aimed at stopping a project.

Ecological, air quality and water impact are the more common aspects raised in submissions. As for ecological assessment, the submission would identify the concerned species that are found (or maybe found) in the area, like the list in Appendix 5.1. For air quality, water quality and others, the comment usually include sensitive receivers of concerns, either as a whole region or as an individual. While these aspects are generally covered in the Technical Memorandum, the comments usually take a slightly different viewpoint than in the technical memorandum. For example, the comment in the *Tung Chung New Town Extension* Project Profile included requesting an assessment of water quality. Instead of whether it could fulfil the water quality objectives, it focused on whether the water quality would remain suitable for the species living there.

Occasionally, there are contents aimed at extending the scope of assessment. The request about assessing the Urban Heat Island effect is one of the examples. In Friends of the Earth comments on the Expansion of Hong Kong International Airport into a Third-Runway System Project Profile, they request the assessment to include Green House Gas emission and Health Impact<sup>48</sup>. These issues are in the grey area of the Technical Memorandum, as they are not identified in the guidelines. However, they are likely environmental impacts that should be assessed<sup>49</sup>.

#### 5.3.4. Technical Review of the information provided

Besides queries about what to be assessed or addressed in the EIA report, many submissions would include comments on the information provided on the Project Profile. For example, Green Power's comments on the Tuen Mun Western Bypass Project Profile revolve around the lack of mentioning environmental impacts induced by blasting with explosive and the regional air quality condition<sup>47</sup>. The Conservancy Association's submission to Mai Po Nature Reserve Infrastructure Upgrade Project Profile criticized that the project profile did not provide sufficient information about the potential ecological impact<sup>45</sup>. In both cases, they requested

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<sup>49</sup> As described in Section 4.1 of the Technical Memorandum, "An EIA report shall comprise a document or series of documents providing a detailed assessment in quantitative terms, wherever possible, and in qualitative terms of the likely environmental impacts and environmental benefits of the project"

the Director of Environmental Protection to reject the project profile and ask for a resubmission. However, they did not propose many actions to be taken into the EIA report.

#### **5.4. Responses from Authority and Project Proponent**

Since neither the Authority (i.e. the Director of Environmental Protection) nor the project proponent would respond directly to queries by the PhD researcher, this section relies on observations made for the case studies.

##### **5.4.5. Response from the Authority**

Upon receiving a comment, the Director of Environmental Protection will reply and acknowledge receipt to the submitter, stating that the officers will proceed in accordance to the EIA Ordinance, and the decisions would be released to in EPD's office and website<sup>50</sup>. This acknowledges receipt is the only reply through the whole EIA process. Under the EIA Ordinance, the Director of Environmental Protection is required to consider any comments received in drawing up the EIA study brief.<sup>51</sup> While there are submissions of comments aimed to stop the project from proceeding to the EIA process, there is not any reported case that an application of Study Brief was rejected because of public comments received in the public inspection stage. Also, the Director of Environmental Protection decision of issuing an EIA study brief has never been challenged in court.

The EIA Study Brief outlines the requirement and guidelines of content to be included in the EIA report. These requirements and guidelines are supposed to have taken the submitted comments into account. It must be noted that the EIA Study Brief is a technical document that focuses mainly on technical assessments. The capacity for accommodating comments is limited. As shown in the *Tung Chung New Town Extension* project, most of the technical queries listed were addressed, while none of the project/other queries listed was addressed in the Study Brief.

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<sup>50</sup> Confirmed that by submitting comments to the Director of Environmental Protection

<sup>51</sup> EIA Ordinance Part II, Section 5

Similarly, the Study Brief would not impose any direct development control measures (like those described in Section 5.3.2 ) on the project at this stage<sup>52</sup>.

Regarding the comments about technical assessments, the EIA Ordinance authorized the Director of Environmental Protection to determine the detailed requirements. There isn't clear evidence to show the rationale behind whether the requests would be accommodated or not. It appears that the requests about additional assessment on the typical environmental aspect, i.e. the issues that are listed and guided in the Technical Memorandum are most likely to be addressed, such as assessing the potential impact associated with certain activities or assessing the impact on certain sensitive receivers/species. For issues that not clearly within the framework in the Technical Memorandum (or in what could be called a "grey area"), it would be up to the Director of Environmental Protection to make a professional judgement on whether it would be included. The request about assessing the Urban Heat Island effect was rejected in the *Tung Chung New Town Extension* project; however, the request of adding Health Impact Assessment in the Expansion of Hong Kong International Airport into a Third-Runway System project was accommodated in the Study Brief. The reason(s) behind was not clear.

#### 5.4.6. Response from Project Proponents

Since the comments submitted to the Director of Environmental Protection are confidential, the project proponent would neither know the details about the comments nor the contact details of those submitting comments, unless those comments were made publicly by the one submitted them, like the cases mentioned in the above sections.

As explained in Section 5.4.5, comments about the technical assessments would usually be addressed in the Study Brief that is issued by the Director of Environmental Protection. The requirement stated in the Study Brief is enforceable under the EIA Ordinance, in which the EIA report must contain the information requested. However, as long as the assessment followed the guidelines and met the criteria set out in the Study Brief, it would up to the project proponent to

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<sup>52</sup> However, maybe included in the Environmental Permitting stage

decide what actions to be taken to meet those objectives, or whether they would go beyond the required level.

It is the project proponent who decides on the approach to responding to the other comments about the project profile and the preparation of EIA report. In recent years, some project proponents would establish stakeholder or community liaison/engagement activities. Besides the Tung Ching New Town Extension project, projects such as the Expansion of Hong Kong International Airport into a Third-Runway System, Hung Shui Kiu New Development Area project and the later railway projects also have had regular meetings with concerned groups, including green groups and local resident groups. These activities are not part of the EIA mechanism but strongly related to the EIA process, and could influence the preparation of the EIA report. As shown in the *Tung Chung New Town Extension* project, the project proponent uses EIA as an instrument to verify the concerns raised by the groups. At the same time, the concerned groups use the platform to press for actions and mitigation measures to be installed. Some of the discussed issues, such as the river park and buffer zone later became project elements and were proposed as mitigation measures in the EIA report.

## **5.5. Functions of EIA preparation**

### **5.5.1. Shaping EIA study**

The cases show that comments submitted by members of the public could shape the EIA technical assessments through directly influencing the EIA Study Brief, or; indirectly through the liaison with the project proponents. Although there is no clear explanation showing the mechanism behind it, the case studies pointed out several observations regarding such influences. The requirements under the EIA Ordinance and Technical Memorandum seems to be a crucial factor. From the case study of Tung Chung New Town Extension and the other projects examined above, the EPD and project proponent tends to take the technical requirements seriously to ensure the EIA fulfils the EIA Ordinance and Technical Memorandum requirements. As such, if the comments submitted raise concerns upon an issue that is regulated under the Ordinance, the EPD tends to require a detailed assessment for the issues of concern in the Study Brief.

For environmental issues that are not directly regulated under the EIA Ordinance and the Technical Memorandum, the case studies do not show clear evidence on whether or how would they be accommodated. It tends to show that it would depend on the EPD and the Director of Environmental Protection to make a judgement on whether the issue would be included in the EIA Study Brief. However, the rationale of that judgement is not transparent and there isn't any mechanism to challenge the merit of that judgement in the EIA system.

#### 5.5.2. Shaping Project Development

The case studies show that there is no direct mechanism that brings enquiries about the Project Profile to the project development. EPD and the Director of Environmental Protection would not impose restrictions on the project at this stage. Also, there is no provision under the current EIA establishment for the project proponents to address project development concerns. However, the case study of Tung Ching New Town Extension shows that the public inspection window provides an opportunity for the stakeholders to bridge environmental issue and project development. Concerned stakeholders could use the project profile and the EIA study to build up their argument for the liaison with the project proponent, thus influence the project development. The available capacity of making influence depends on both the efforts of the concerned stakeholder and the willingness of project proponents to liaise with them. As such, public participation during the EIA preparation can provide an opportunity for shaping the project development through indirect means.

### 5.6. **Conclusion**

This chapter uses the case study of *Tung Chung New Town Extension* and various other minor case studies to illustrate the role of public participation in the preparation of the EIA report and examine whether and how the concerns/issues raised could be accommodated in the process.

Public participation did bring a wide range of issues into consideration, and public members seek to take the opportunity to press for the environmental (and others) outcomes of the project according to their agenda. Among all, comments related

to the technical assessments show the strongest influence, which public input could widen the scope of and strengthen the depth of the assessments. However, the capacity for it to tackle policy, administrative or project management issues are questionable.

While there are increased public participation windows through other means, project proponents these days seem to be more willing to have additional dialogues with the stakeholders. These provide opportunities for stakeholders to liaise and shape environmental protection and mitigation measures in the process and for the preparation of an EIA report. The following chapters will continue to examine public participation practices at other stages of the EIA process.



## 6. PUBLIC PARTICIPATION IN REVIEWS OF THE EIA REPORTS AND APPROVAL

Following the examination of public participation practices during the preparation of EIA reports in Chapter 5, this chapter describes and explains the public participation practice during the public inspection of EIA reports. After the *Environmental Protection Department* and the Director of Environmental Protection receive an EIA report and decide it is suitable for public inspection, the project proponent would need to advertise the availability of the EIA report and start a 30 days public inspection period. Public members could submit their comments to the EIA register office online or through a hard copy during this period. At the same time, the Advisory Council on Environment (ACE) would review the EIA report and may ask the Project Proponent to make a presentation if necessary<sup>53</sup>. The received comments would be anonymized and passed to the members of ACE, who would have a chance to follow up on comments<sup>54</sup>. Under the EIA Ordinance, the Director of Environmental Protection is required to consider the received comments from the members of the public and recommendations of ACE before making a decision. This chapter examines and analyses the comments and concerns raised by members of the public during the public inspection, and how these concerns would (or would not) be addressed and reflected on in the decision making.

### 6.1. Data Collection and Analysis

The data collection and analysis here aimed at investigating four subjects: 1) How often did public members utilize the public participation opportunities during the EIA report review stage; 2) What were their concerns and comments; 3) How were these concerns and comments treated in the process; 4) Whether and how these concerns and comments were addressed.

For item 1, EPD's EIA register website contains information about the number of received comments by the Director of Environmental Protection for each project

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<sup>53</sup> While under the EIA Ordinance (section 6 to 8), The Director of Environmental Protection decides whether a EIA report need to be submit to ACE and present in ACE meeting, ACE members, under the Terms of Reference could comment on any environmental matter or EIA report if they want to.

<sup>54</sup> As reflected in the meeting minutes of the ACE meetings.

approved under the Ordinance. Basic statistical data could be obtained through extracting the relevant data from the website.

For item 2, a direct way to investigate the public's concern is to analyze the comments they submitted during the public inspection period. The comments received by the Director of Environmental Protection are deemed to be confidential. I attempted to retrieve the anonymized comments by requesting an information release, using the "Code on Access of Information"<sup>55</sup> mechanism. The Environmental Protection Department replied that the comments were confidential and only a brief summary could be made available. The summary they could provide only cover the main subjects raised by the public, which is not sufficient for detailed analysis. There is one exceptional case that the comments and response to comments were made available for public access, which is the *Development of the Integrated Waste Management Facilities Phase 1*. It is a project proposed and managed by the Environmental Protection Department itself. All of the 309 sets of written comments received by the Director of Environmental Protection during its first submission were available for public access. Therefore, the comments and responses to comments of this project are used here as a case study.

Item 3 refers to the review process and comments received. Comments would be anonymized and forwarded to the project proponent and the ACE for considering. Similar to item 2, the EIA of *Development of the Integrated Waste Management Facilities Phase 1* provided the chance to look at the response of a project proponent. Responses to the 309 sets of comments are available for public access. While this EIA was also discussed in the ACE, meeting minutes of the ACE were examined to check whether public concerns and comments were discussed.

For item 4, the impact of the public inspection in the approval decision of the EIA report and the Environmental Permit is considered. There is no direct evidence showing how the decisions were (or were not) affected by the comments from public members. The decision-making process is not transparent and the

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<sup>55</sup> An initiatives that allow public members to apply for release of government documents and information, further information: <http://www.access.gov.hk/>

reasonable of the decisions are not accessible. Therefore, it would rely on cross-examining public comments, the recommendation by ACE, the approval condition and the environmental permit statements to determine whether or how the decisions were influenced by such public comments.

## 6.2. Background of the Case Study

In order to examine the content of the public's comments submitted during the Public Inspection period of the EIA report, it is necessary to find a case where comments are accessible. As explained earlier, the comments received by the Director of Environmental Protection are deemed to be confidential and generally not accessible for public members. The only exception is the EIA of *Development of the Integrated Waste Management Facilities Phase 1* which is a project proposed and operated by the Environmental Protection Department itself. The project commenced the EIA process in 2008. The EIA report was first released in February 2011, but later withdrawn from the submission in May<sup>56</sup> and re-submitted in November 2011. The EIA assessed the environmental impact and acceptability of two shortlisted sites: Shek Kwu Chau (SKC) and Tsang Tsiu Ash Lagoon (TTAL). The EIA report suggests that both of the sites were environmentally acceptable but did not suggest which site should be used. The Hong Kong government announced that Shek Kwu Chau was the preferred site in February 2011<sup>57</sup>. This was done simultaneously to the release of the EIA report for public inspection in the first submission. The EIA and environmental permit were approved in January 2012. However, a Judicial Review application was submitted by a resident at Cheung Chau, about whether the EIA report fulfilled the requirement of the EIAO, also the legality for the Director of Environmental Protection in approving a project proposed by the Department of Environmental Protection itself. The Judicial Review was ultimately dismissed in December 2015 by the Court of Final Appeal.

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<sup>56</sup> The withdrawal was likely due to the succeed of Judicial Review on "Hong Kong-Zhuhai-Macau Bridge" EIA in April 2011.

<sup>57</sup> As mentioned in the Hong Kong government newsletter, Available on [http://archive.news.gov.hk/en/categories/environment/html/2011/02/20110217\\_111506.shtml](http://archive.news.gov.hk/en/categories/environment/html/2011/02/20110217_111506.shtml) (Accessed 1 Apr, 2018)

The latest status update of the project (as of January 2020) is that the construction of the artificial island has commenced.

At the second submission of EIA reports, the (319 sets of) comments and associated responses to comments received during the first submission was attached as Volume 5 of the EIA report<sup>58</sup>. This enables an in-depth examination of the material, thus selected for the case study. However, the 268 sets of comments for the second submission of the EIA report were not accessible to the public. There was little change to the components of the project, and the major areas of concerns are consistent among the concerned parties. It is expected that the content of the comments received in both of the EIA submissions would be similar.

### **6.3. Usage of Public Inspection of EIA reports**

On the EIA register's website, the number of comments of each EIA report from 1998 to 2017 (based on the register year) is logged and summarized. Table 6.1 shows the distribution of the number of comments. Among 209 EIA reports that are approved under the EIA Ordinance until the end of 2017, most of the EIA reports received less than ten comments, around 10% of the reports received more than one hundred sets of comments and 2% of the reports received more than one thousand sets of comments. The distribution is shown in Table 6.1. The distribution suggested that it is uncommon to see an EIA report receives a high number of comments. Table 6.2 lists the top five EIAs that received the most comments.

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<sup>58</sup> Available from [http://www.epd.gov.hk/eia/register/report/eiareport/eia\\_2012011/index.htm](http://www.epd.gov.hk/eia/register/report/eiareport/eia_2012011/index.htm) (Accessed 1 Apr 2018)

**Table 6.1 Distribution of Quantity of Comments on EIA reports (1997 – 2017)**

<b>Sets of Comments Received by the EPD</b>	<b>Number of EIA</b>
> 3000	2
2000 – 3000	2
1000 – 2000	5
500 – 1000	3
300 – 500	1
100 – 300	4
50 – 100	5
30 - 50	5
10 - 30	9
1 - 10	111
0	62
<b>Total:</b>	<b>209</b>

NB: The EIA report and all relevant information of the Permanent Aviation Fuel Facility from Hong Kong International Airport project have been removed from the website, thus, the set of comments received by EPD is omitted on the website thus not counted in the table.

**Table 6.2 Top Five EIAs receiving the highest numbers of comments (1997 to 2017)**

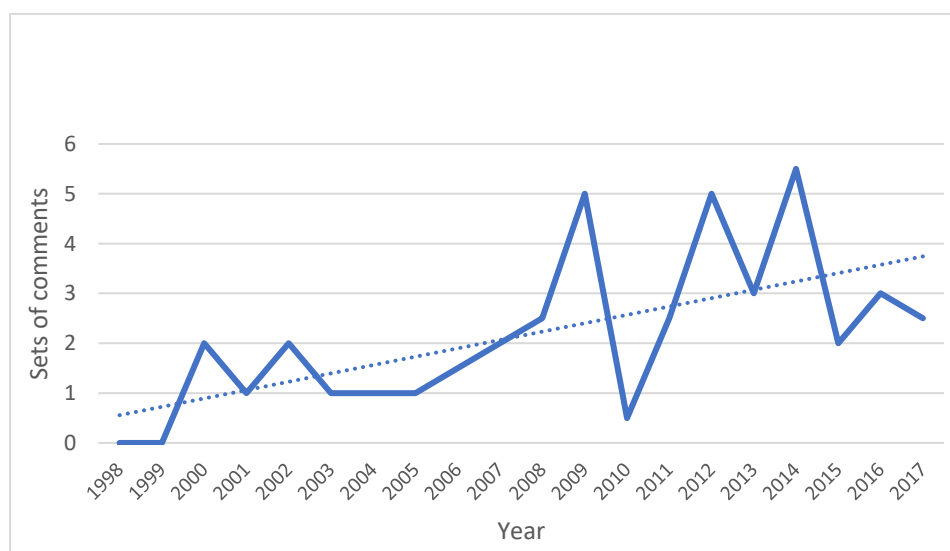
<b>Project Title</b>	<b>Year</b>	<b>Comments Received by EPD</b>
Expansion of Hong Kong International Airport into a Three-Runway System	2014	29133
Liquefied Natural Gas (LNG) Receiving Terminal and Associated Facilities	2007	16392
Permanent Aviation Fuel Facility for Hong Kong International Airport	2007	2658
Tung Chung New Town Extension	2016	2306
Tuen Mun - Chek Lap Kok Link	2009	1377

The highest number of comments in the record is obtained for the Expansion of Hong Kong International Airport to a Three-Runway System in 2014, which received a total number of 29,133 comments. The second highest is the Liquefied Natural Gas (LNG) Receiving Terminal and Associated Facilities EIA, receiving 26,392 comments. While it is odd to have an EIA receiving more than one thousand comments, these two projects are exceptional cases. A further desktop investigation reveals that the high number of comments were results of collective actions against the project, and in which most of the comments were formulated through standard templates. For example, the Expansion of Hong Kong International Airport into a Three-Runway System EIA had caught the attention of several campaigns from concerned groups, urging public members to submit comments and voice their objections to the project. Several groups also made websites that allowed public members to submit comments with their drafted comments<sup>59</sup>. Similarly, regarding the high number of comments received for the

<sup>59</sup> Such as Campaign by Hong Kong Conservation Society, WWF (HK), Green Power and various other green groups. The webpages that used for the comments submission were however no longer accessible when checked in July 2018

Liquefied Natural Gas (LNG) Receiving Terminal and Associated Facilities EIA and Permanent Aviation Fuel Facility for Hong Kong International Airport EIA, it was reported in the ACE EIA subcommittee meeting that most of the comments were in the form of standard letters or emails. The high number of comments received for a particular project indicate that there were collective actions against the EIA. However, the actions may not necessarily focus purely on environmental matters. For example, the Expansion of Hong Kong International Airport into a Three-Runway System also attracted a lot of criticism regarding its cost and purpose of the project<sup>60</sup>.

The medians of the number of comments received in the public inspection of the EIA report over the 20 years of EIA practices is shown in Figure 6.1 and Table 6.3.



**Figure 6.1 The Trend of Median Numbers of Comments Received in Each Year**

<sup>60</sup> For example, the joint campaign group *People's Aviation Watch* archived articles arguing against the project <https://peoplesaviationwatch.wordpress.com/>.

**Table 6.3 Median Number of Comments Received in Each Year**

<b>Year</b>	<b>Total No. of EIAs</b>	<b>Median no. of comments</b>
1998	4	0
1999	24	0
2000	9	2
2001	11	1
2002	9	2
2003	7	1
2004	7	1
2005	11	1
2006	10	1.5
2007	12	2
2008	12	2.5
2009	21	5
2010	8	0.5
2011	6	2.5
2012	6	5
2013	13	3
2014	4	5.5
2015	8	2
2016	9	3
2017	9	2.5
<b>Overall Median:</b>		<b>2</b>

As shown in the above table and figure, the median number of comments in each year is between 0 to 5. It seems that there is a trend that the median number is rising. However, that growth is small and slow. There isn't much evidence that could explain the rising number, as number, nature and scale of EIAs conducted in each year are very different, and the details of the comments are not available for further analysis. One possible explanation is that there are more concerned groups that would review EIA reports on a regular basis. With a search on the media releases, it is noted that the major green groups in Hong Kong do regularly submit comments on EIA reports if the project involves subject(s) of concern. These include the groups mentioned in Chapter 5, i.e. Green Power, WWF (HK), Hong Kong Bird Watching Society and The Conservancy Association.



The continuous involvement of these green groups in the reviewing of the EIA reports does play a role in the EIA practices, it is further elaborated on in Chapter 8.

#### **6.4. Content of Comments During the Public Inspection of EIA Report**

As described in Sections 6.1 and 6.2, the EIA of *Development of the Integrated Waste Management Facilities Phase 1* provides the opportunity to conduct a detailed inspection of the content. The original copies consist of 121 pages, some written in Traditional Chinese and some in English. The comments are summarized and presented in Appendix 6.1. Among the 121 pages of comments, it shows that public members use the public inspection window for various purposes, with various agendas. Here I elaborate on three major observations: (i) Duplicated submissions that come in high quantity but with identical contents; (ii) common concerns that are shared by the submissions, regardless of whether they are duplicated submissions; and (iii) the level of detail and reference of EIA findings among the submissions.

##### **6.4.1. Duplicate Submissions**

While a total of 319 individually submitted sets of comments were received, the officers in the Environmental Protection Department summarized them into 63 individual sets of comments as the others are duplicated. The most prominent example of that is the comment ID: *PC011*, which itself comes with 219 duplicated sets of individually submitted comments; another one would be ID: *PC178*, which comes with 21 duplicated sets.

Although the comments are anonymized, the content of the comment provided hints that suggest the likely author. *PC011* and the duplicates are likely submitted by the residents of Cheung Chau (i.e. the closed populated area from the proposed SKC site). The content of *PC011* is ten sentences of slogans saying the project would ruin the natural environmental, adversely affect the health and livelihood of the Cheung Chau Resident and ignore their voice in the decision-making process. *PC178* stated that it is a joint statement, but the authors were crossed out. The content suggests this was written by the same person/group as it tried to argue

that the SKC site is not a preferable option due to various environmental, social and engineering constraints.

The duplicate submissions may not necessarily be focused on the contents in the EIA report. For example, PC011 and its duplicates have a stronger focus on the impacts on the livelihood of the residents as compared with impacts on the natural environment. Nevertheless, these duplicated submissions are not only about challenging the merits of the EIA report; they are also a sign of collective actions and carry a political message of the concerned public.

#### 6.4.2. Common Concerns

Out of the 63 individual comments, many are common and appear in multiple submission. Table 6.4 summarized the frequency of each of the aspects. The identified aspects of concerns are divided into four categories, *Policy and Decision Making*; *Engineering*; *Environmental*; and, *Livelihood*. It is worth noting that, among the four categories, only the concerns under the *Environmental* category directly fall under the technical scope of EIA. Others are related but are not usually an issue in the Technical Memorandum of the EIA Ordinance. For example, as mentioned in Section 6.2, the technical memorandum emphasizes meeting the environmental criteria. The EIA report concluded that both sites were environmentally feasible according to the EIA Ordinance but did not make a recommendation on site selection. Thus, the site selection decision of the preferred site was made by the higher government officials during the release of the EIA report. As such, the comments and challenges on the site selection are more about the quality of decisions than the quality of the EIA report. Similarly, while concerns over the engineering settings or the technology are somehow related to the EIA, as they determine the emission inventory, these issues are decided outside of the EIA process, and much before the release of an EIA report<sup>61</sup>. Impacts on livelihood are indirect environmental impacts that the subjects are not directly regulated under the EIA Ordinance.

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<sup>61</sup> As noted in the response to comments, the technology and engineering settings were decided after the consultation with the Advisory Group on Waste Management Facilities which took place in 2008 to 2009, two years before the release of EIA report.

**Table 6.4 Subjects of Concerns Identified in the Comments**

Subjects of the Concern	Number of Comments	
	Excluding Duplicates	Including Duplicates
<i>Policy and Decision making</i>		
Site Selection	32	280
Waste Management Policy	18	18
Consultation Process	5	9
<i>Engineering</i>		
Engineering Setting and Technology	10	17
Alternatives	8	13
Technical Descriptions	3	3
<i>Environmental</i>		
Ecology	34	288
Air Quality	25	278
Landscape and Visual	16	20
Noise	3	4
Water Quality	5	6
Fisheries	3	228
Cumulative Impact	1	1
<i>Livelihood</i>		
Tourism	7	13
Health	3	3
Others	2	2

NB: Some submitted comments are obviously modified from another submission. They are counted as 'Excluding Duplicates' in the above table, tally with how these comments were treated in the original Response-to-comment table.

Among all of the identified issues, more than half of the comments were concerns about the site selection, e.g. not being satisfied with the site selection process, criticism of the selection criteria or being unconvinced that SKC is a suitable site. For environmental issues, impact to the ecology, including terrestrial and marine ecology, is the most commonly mentioned issue, followed by Air Quality and Landscape and Visual Impact. It is worth noting that there is a total of 228 submissions about fisheries' impacts that come from three sets of comments.

With a deeper look at the comments on environmental impact, there are more concerns over the regional long-term impacts, e.g. permanent loss of population and habitat of certain identified species, operational air quality impact from the chimney emission and change to the scenic view from Cheung Chau. Comments

regarding the ecological impacts tend to be specific. Among the 34 submissions, all but two of the submissions mentioned specific specie(s) of conservation interest, covering several terrestrial and marine ecologically sensitive sites and species. The more commonly mentioned species are finless porpoise and the white-bellied sea eagles. In contrast, comments on Air Quality tends to be more generic, only 10 of the 26 submissions mentioned specific pollutants of concern.

On the other hand, there is a high number of comments on the site selection, arguing that the SKC site is not preferable. Especially the submission ID: PC011 which has 219 duplicate submissions pressed heavily on the site selection decision as compared to the environmental factors it mentioned. It echoes that when public members take collective actions during the EIA review process, they focus more on the decision level issues than the actual quality of the EIA.

#### 6.4.3. Level of Details

Except for submission ID: PC002<sup>62</sup>, all of the submissions contain certain levels of disagreement to the EIA findings; however, as pointed out in Section 6.4.1 and 6.4.2, some use the window as part of collective actions against the project decisions. As such, the number of submissions, or the number of issues that got mentioned may not necessarily engage in the review on the quality of the EIA report. Further analysis was conducted to examine the level of detail of these submissions. The comments are grouped into four categories based on whether they include descriptions or explanations of their concerns, and whether they referred to the findings of the EIA: *None*; *Mentioned*; *Moderate*; and, *Detailed*. Table 6.5 shows the result.

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<sup>62</sup> PC002 is submitted by a journalist which is a request of further information and ask for an interview.

**Table 6.5 Level of Details among the Submitted Comments**

Level of Details	No. of Comment
<b>None:</b> Do not mention any subject or issue of concern.	2
<b>Mentioned:</b> Keyword/ Terms about subject(s) of concerns is mentioned but does not provide any description or explanation	16
<b>Moderate:</b> The subject(s) of concerns is followed with a description on the issue or basic explanation on why the subject is significant.	18
<b>Detailed:</b> The subject(s) of concerns is detailed explained, on why the subject is the significance and why the EIA could not address their concerns.	21

Remark: Duplicate submissions are excluded. Six of the comments do not include any technical issue about the project, thus they are also excluded in the count.

Among the 63 sets of comments, 34 only mentioned some keywords or provided general descriptions of the subjects of concern. For example, comment ID:PC210 (categorized as mentioned) objected the proposed project as *“Shek Kwu Chau is an area of scenic beauty, and considerable environmental value. It and the waters around it contain many rare or endangered species”*, or in comment ID:PC161 (categorized as moderate), while expressing concern on the ecological impact, it only state that *“The cable laying process may lead to corals being destroyed, one which cannot be replaced. There are doubts about the effectiveness of the proposed translocation as such processes usually fail to completely avoid a direct loss”*.

21 sets of comments provided detailed explanations about their concerns with reference to the EIA assessment findings. These comments are mostly unique in nature and adopt different approaches and focus. As observed, there are three major agendas in the arguments. First, it is to challenge the merit of the decision, mainly the site selection decision and the process of the project. For example, while comment ID:PC010 does not challenge the technical assessment details, it uses comparisons of the EIA findings on potential sites to argue that SKC is not preferable, also questions the merit and reasoning of the site selection decision.

The second agenda is to argue that there are uncertainties in the technical assessment, or the environmental impacts were underestimated in the EIA report. For example, comment ID:PC169 focused on arguing whether the air quality model predicted the ‘worst-case scenarios’, point out that the assumption of improvements in regional air quality (background) is an optimistic forecast without concrete evidence that it will be achieved. The third agenda is to argue whether the environmental impacts are acceptable. For example, comment ID:PC294 raised concerns on the disturbance and habitat loss of several identified species, it argued that the proposed mitigation measures are not sufficient to conserve these species, and suggests that additional mitigation measures and long term conservation plans should be implemented.

The comments that are detailed tend to be focusing on one or two subjects (i.e. Ecology and/or Air Quality). This may be a reflection of the challenges public members face when reviewing an EIA report. There are only 21 comments that provided detailed explanations and references to the EIA report findings. While this is a small portion among the total 319 submissions, it is still much higher than the general number of comments received for an EIA report.

#### **6.5. Response from the Project Proponent**

Following the public comments on the EIA of *Development of the Integrated Waste Management Facilities Phase 1*, which is explained in Section 6.4, the responses to comments from the project proponent (i.e. EPD) were also analyzed. EPD’s responses to comments are mostly standardized. The responses to each of the comments are summarized as Appendix 6.1, full and detailed responses are available in the Vol. 5 of the EIA report<sup>58</sup>.

##### *Justifying the need for the project*

While many comments criticize the effectiveness of long-term waste reduction initiatives or the necessity of the project, EPD did not answer directly to many of critics on the policy, such as whether the policy is sufficient or efficient in archiving the objectives, the focus of EPD’s response was that the need of the project was justified. EPD repeatedly response with the line that the Hong Kong government

have established the *Policy Framework for the Management of Municipal Solid Waste in Hong Kong* initiatives, and there is a target to raise the Municipal Solid Waste recovery rate and reduce waste production. EPD stressed that the project is needed to reduce the bulk of Municipal Solid Waste size.

*Emphasize that alternatives had been considered*

For comments that argue about the engineering settings or choice of technology, EPD emphasized that the decision of adopting advanced thermal incineration followed reviews on proposals and recommendations of the Advisory Group on Waste Management Facilities. It also stressed that all of the available technology was considered in the process, and the conclusion is supported by the Advisory Council in the Environment. Similarly, when asked about whether there are other alternative sites, EPD responded that there had been a site search exercise, followed by shortlisting and evaluating potential sites. The responses tended to emphasize more that there was a process in evaluating the alternatives than whether the selected technology and site is actually the best.

*Reiterate that environmental impacts would comply with standards*

For comments that expressed concerns over certain environmental issues or criticized against the adverse impacts to the sensitive receivers, EPD's emphasizes that the EIA has assessed that environmental impacts are expected to comply with Hong Kong and International Standards. For air quality impact, EPD stressed that the most stringent EU standards were adopted; for ecological impacts, the EPD stressed that the project would avoid and mitigate the impacts to the ecologically sensitive area and species with conservation interest. The EPD also stated that all relevant factors or species were included in the assessment, that conservative approaches were adopted would not underestimate the impact.

This type of response was also used for comments that argued that SKC is not the preferable site or TTAL is a better site than SKC. In the response to these comments, the EPD emphasizes that the EIA has assessed the environmental impacts in both, SKC and TTAL sites under three different scenarios, finding that both sites were

complying with the international and Hong Kong environmental standard after implementation of mitigation measures.

#### *Other Technical Explanation*

For other comments that are more specific, the EPD provides additional explanations on the subject. For example, when asked whether the engineering design would work as intended and whether the impact assessment model is accurate, the EPD provided a lengthy explanation on the subject. In general, this type of response is more specific than the others.

### **6.6. The Role of the ACE in Public Participation**

The Advisory Council on the Environment (ACE), with its EIA subcommittee, is the statutory body in reviewing the EIA report. During the Public Inspection of EIA reports, the EIA subcommittee of the ACE reviews the EIA reports as a parallel process. If it was deemed necessary that the ACE would host a meeting(s) to discuss the EIA report, invite the project proponent to present and question, and make suggestions and give recommendations accordingly. The suggestions and recommendations by ACE are usually taken seriously by the Director of Environmental Protection. There is no reported case that the suggestions by ACE on the EIA report were ignored by the Director. One possible explanation is that if a Judicial Review on an EIA decision was launched, the discussion and suggestions from ACE would be presented to the court<sup>63</sup>. While the ACE does not have an official role in the public participation process, case study and interviews reveal that it does play several functions in the public participation process.

#### **6.6.4. Formal Meeting and Open Questioning**

Since the comments from a member of the public would be forwarded to the members of ACE, if ACE or EPD decide that a meeting and presentation session is

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<sup>63</sup> Especially in the Judicial Review of the Development of the Integrated Waste Management Facilities Phase 1 project, when the legality of whether the Director of Environmental Protection in approving a project proposed of EPD, the endorsement by ACE and that the suggested conditions were accepted act as a ground for defense.



needed, the EIA subcommittee would have an opportunity to follow up on the issues raised in the received public comments<sup>64</sup>.

Following the case study illustrated in Section 6.4, the EIA of *Development of the Integrated Waste Management Facilities Phase 1*. The EIA subcommittee of ACE hosted meetings and invited the project proponent for presentation and questioning on March 2011 for the first submission (116<sup>th</sup> EIA subcommittee meeting), and December 2011 for the second submission of the EIA (118<sup>th</sup> EIA subcommittee meeting)<sup>65</sup>. The meeting minutes of both meetings were reviewed to investigate whether and how the discussions reflected the concerns of the public.

As shown in the meeting minutes of the 116<sup>th</sup> and 118<sup>th</sup> EIA subcommittee meetings, the questions from members of ACE tallied with the public comments. There were extensive discussions on the Air Quality and Ecological Impact during the 116<sup>th</sup> meeting; site selection, alternatives and Landscape and Visual Impact on the 118<sup>th</sup> meeting. In addition to the subjects, many of the details were covered in the enquires, such as the dioxin emissions control, and impacts on certain named species in the vicinity. Occasionally, some enquiries would note that there is a public concern on a specific issue, for example, on the 116<sup>th</sup> meeting, the Chairman noted some comments of the public with regards to the justification for the need of the project and asked EPD to clarify, and; on the 118<sup>th</sup> meeting, a member enquired about the possibility of continuous dioxin monitoring to address public concerns over the health risks. The members of ACE, or at least some of them, are aware of the issues that are raised in the public submissions.

The ACE meeting served two functions in the process: By questioning the project proponent or the authority in the Question and Answer session, the project proponent would need to give a sound justification on the project need or design, and explain the assessment methodology and / or findings. The Question and Answer sessions are open for the public to sit in, and the meeting minutes are open

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<sup>64</sup> Confirmed by the interview #3.

<sup>65</sup> Meeting minutes are available on EPD's website: [http://www.epd.gov.hk/epd/english/boards/advisory\\_council/maincontent.html](http://www.epd.gov.hk/epd/english/boards/advisory_council/maincontent.html) (Accessed 20 Apr 2018)

for public access, making it an effective open response to the enquiries, especially when most of the EIA report does not have the response to comments attached like this case study. Moreover, the members of ACE may try to make a resolution on the concerned issues by suggesting approval conditions or recommendations. The Director of Environmental Protection is required to consider ACE's comment and suggestions before making a decision, and these suggestions from the ACE would usually be adopted. This is further elaborated on in Section 6.7.

#### 6.6.5. Informal Interaction with Members of the Public

Members of the public, in particular green groups, can contact members of the ACE with concerns over environmental impacts of a project. The details about this kind of activities are not known, as it is not routine practice. As mentioned in Chapter 4, the appointment of ACE members included persons nominated by the major green groups. With cross-checking, it is also found that some of the members are on the board of directors among the green groups<sup>66</sup>. The appointment of ACE is personal, and the member does not necessarily represent the view of the organization they have a post in (this point is stressed by the interviewee #3). Despite that, this established connection allows communication and interaction between (some of) the ACE members and the major green groups. As told by interviewee #3, green groups would liaise with the ACE members that they have connections with if an EIA involved matters that were of concern to them. In these cases, green groups would try to persuade the members of ACE to press the project proponent in the ACE meeting. If necessary, green groups could also use their database such as past ecological survey results to help the members of ACE in reviewing the EIA report.

Advised by interviewee #3, the green groups played a role in the review of *Construction of Cycle Tracks and the associated Supporting Facilities at Nam Sang Wai, Yuen Long* EIA in 2013. In this EIA, green groups expressed concerns over the ecological impact on waterbirds due to the construction of a bridge crossing the Shan Pui Rivers and increased visitor activities in that area because of the bridge<sup>67</sup>.

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<sup>66</sup> For example, in the latest appointment (at Jan 2017), Dr. Tsang Po Keung is the current Chairman of Green Power; Dr. Hung Wing Tat is a Director of The Conservancy Association

<sup>67</sup> With a desktop search, Hong Kong Bird Watching Society, Green Power and The Conservancy Association are confirmed to be involved as reported in their media archive or forums.

Nam Sang Wai is a popular bird-watching site in Hong Kong that green groups have abundant survey records on. The green groups used the records to liaise with and convince the members of ACE that the ecological value of the site and the impacts are higher than those reported in the EIA.

With cross-checking with the ACE meeting minutes<sup>65</sup> (the 122<sup>nd</sup> EIA Subcommittees Meeting), it is found that there was a heated discussion on the ecological impact at the proposed bridge on Shan Pui Rivers. Several members of the ACE questioned the methodology used in the assessment, noting that they disagreed with the methodology adopted, as it did not reflect the full picture of species using that area. They were also dissatisfied with the proposed mitigation measures. At the end of the meeting, the EIA subcommittee decided that they could not endorse the submitted EIA without further information that the environmental impacts were acceptable under the proposed design, and then made a suggestion that the Director of Environmental Protection exercises her authority to require the project proponent to provide further information. Later on, in April 2016, the EIA application was withdrawn by the applicant<sup>68</sup>, suggesting the project was suspended.

## **6.7. The overall functions of Public Participation in EIA review**

### **6.7.6. A critical review of the Project Design and Environmental Measures**

The case study shows that the project proponents tend to be unwilling to implement significant changes to project design or environmental measures. As shown in the case study illustrated in Sections 6.4 and 6.5, the overall responses by the project proponent were defensive in nature, especially with regards to criticism on project design and technical assessment. The project proponent tends to emphasize two aspects: The need and design of the project were reasonably justified as required in accordance to the EIA Ordinance; and, the predicted environmental impacts would comply with the EIA Ordinance, Study Brief and the relevant environmental criteria. It is reflected in the approaches in responding the

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<sup>68</sup> Noted on EPD's website: <http://www.epd.gov.hk/eia/english/register/open/all.html> (Assessed 24 April 2018)

received comments, also when answering questions during the ACE meeting, with their responses repeatedly stressing that the project design followed a systematic process, and the impacts would comply with the requirement.

However, smaller changes in project design or enhancement in environmental measures are much more common, usually with regards to approval conditions. The meeting minutes of the ACE reveals that members of the ACE would take public concerns into account and would make recommendations to resolve conflicts. In the EIA of *Development of the Integrated Waste Management Facilities Phase 1*, ACE recommended six approval conditions. Among those, some are much more relevant to public concerns, including requesting the project proponent to submit a detailed proposal on the enhancement of air quality monitoring; to advance the preparation works for the designation of a marine park; to submit a fisheries enhancement program; and, to set up community liaison group(s) comprising representatives of concerned and affected parties. These recommendations were later adopted by the Director of Environmental Protection as the official approval conditions<sup>69</sup>. These conditions are indirect and softer measures that promote the enhancement of the environmental design of the project.

#### 6.7.7. Impact on the approval of decision making

There is no reported case in Hong Kong where an EIA was rejected by the Director of Environmental Protection or Withdrawn by the project proponent directly due to public comments or pressure. The current setting does not enable rejecting an EIA purely based on public objections. While ACE makes suggestions to endorse or reject an EIA, it can only focus on the environmental acceptability within the framework of the EIA Ordinance. Such restriction is reflected in reviewing the EIA of *Development of the Integrated Waste Management Facilities Phase 1*. During the 116<sup>th</sup> EIA Subcommittee meeting, when two members opined that the TTAL site is better than the SKC site, the Assistant Director of EPD who attended the meeting advised the members that the role of the EIA subcommittee is to give

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<sup>69</sup> Full approval conditions are available from [http://www.epd.gov.hk/eia/english/alpha/aspd\\_547.html](http://www.epd.gov.hk/eia/english/alpha/aspd_547.html) (Accessed 25 April 2018)

recommendations to the Council on the environmental acceptability of the three assessed scenarios in the EIA report, rather than a preferred site.

In the case of the *Construction of Cycle Tracks and the associated Supporting Facilities at Nam Sang Wai, Yuen Long*, the EIA mentioned in Section 6.6.5 shows the exception scenario the public participation could influence the approval decision making. If a member of the public is able to provide evidence that the EIA would not satisfy the requirement under the EIAO, and this view is supported by the ACE, the ACE can suspend the EIA application and ask the project proponent to provide further information, effectively putting the project on hold.

## **6.8. Conclusions**

This chapter used statistical data and case studies to examine and analyse the comments and concerns raised by members of the public during the public inspection. Most of the EIAs in Hong Kong receive less than ten comments during the public inspection of the EIA report, and it is rare that an EIA report receives more than one hundred comments. The unusually high number of comments shows a sign that collective actions were taken against the project. The case study of the EIA of *Development of the Integrated Waste Management Facilities Phase 1* is one of these examples. The case study summarized and categorized a total of 319 comments that were received during its first submission. It reveals that 219 comments were duplicated from a single source. Furthermore, many of the other individual comments focus on similar subjects. Comments that contain detailed explanations and references to the EIA findings are rare. The responses of comments by the project proponent and discussion in the ACE EIA subcommittee meeting illustrate how public comments were treated. The current setting of the EIA report review is focused on environmental compliance, and the space for asking for more substantial changes is very limited.

This chapter also revealed an unexpected role of ACE in the public participation process, while it provides an opportunity to follow up public comments, and the connection among the members of ACE and green groups could help the reviewing process by bringing additional knowledge into the process.

## **7. PUBLIC PARTICIPATION IN POST- EIA APPROVAL**

Under the EIA Ordinance, the project proponent can apply for environmental permits with an approved EIA report for that project. Once the environmental permit(s) is (are) approved, the statutory process of EIA is complete. The project proponent needs to follow the instructions and criteria stipulated in the environmental report when the project commences. At this stage, follow-up works are required to ensure the findings and suggestions in the EIA will be implemented. There is no well defined conceptual or practical framework about the roles and functions of public participation during the post-approval stages. In Hong Kong, public participation after the approval of EIA is not a statutory requirement or routine process under the EIA Ordinance. Conventionally, public members were given very limited opportunity to participate in the follow-up stages. This is mostly restricted to individual reporting to the project proponent or the authority, such as filing a complaint. In recent years, some EIAs would offer an additional window by requiring the project proponent to liaise with stakeholders or community in the environmental permits.

Comparing this with the public participation windows that were explained and analysed in Chapter 5 and 6, this kind of liaison practice adopts a different approach. While it is an enforceable measure under the provision of the EIA Ordinance, the setting of liaison is mostly determined between the project proponent and the stakeholder/community, and the role of authority is much less prominent in its operation. There is little guidance on how the liaison would operate, and the formation and agendas of the liaisons vary from project to project and group to group. There is limited reporting on the performance or outcome of these practices. This chapter uses case studies on the operation of such liaison practices and examines their role in post-approval environmental management.

### **7.1. Data Collection and Analysis**

As explained in Chapter 3, the South Island Line (East), Telegraph Bay Community Liaison Group was selected for the case study. The case study was conducted in two parts. First, available documents were analyzed, including meeting minutes, EIA reports, monitoring reports, and other relevant materials that were collected

from the project website and EPD's archive<sup>70</sup>. The second part was to conduct interviews to verify the document information and obtain information that does not cover by the documents. Two interviews (interviewee #2 & 8) were conducted during the summer of 2016, with members that participated in the liaison meetings for validating the information on the meeting minutes and supplementary information. Further details about the case study are introduced in section 7.3.

## 7.2. Background of the use of Liaison as EIA follow-up

Members of the public can always report environmental incidents and complaints to the EPD or Project Proponent. It is also a requirement under the Technical Memorandum requiring the Environmental Monitoring and Audit (EM&A) Manual to include the complaint and consultation procedures<sup>71</sup>. The development of community liaison can be seen as an outcome of complaints on how EIAs are handled. It first appeared in 2002, with the Environmental Permits for the Sheung Shui to Lok Ma Chau Spur Line project requiring a "24-hour Dedicated Hotline for Public Complaints and Enquiries"<sup>72</sup>.

The Kowloon Southern Link EIA (the EIA report was submitted in 2004, Environmental Permits were approved in 2005<sup>73</sup>) is the first case where a requirement of conducting liaison with the community was formulated in the environmental permit<sup>74</sup>. The Kowloon Southern Link was a railway expansion project consisting of an underground railway beneath the Southern Kowloon Peninsula, which has high-density residential, commercial, hotels and cultural facilities. The environmental permit required the project proponent (i.e. Kowloon-Canton Railway Corporation<sup>75</sup>) to set up a Community Liaison Office prior and during the construction phase *"to service complaints, comments, suggestions or*

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<sup>70</sup> When checked in May 2018, the project website is no longer assessable.

<sup>71</sup> Annex 21 of the Technical Memorandum

<sup>72</sup> EP-129/2002 series, details available from EPD's website:  
[https://www.epd.gov.hk/eia/english/alpha/aspd\\_226.html](https://www.epd.gov.hk/eia/english/alpha/aspd_226.html)

<sup>73</sup> Details of the EIA are available from EPD's website:  
[https://www.epd.gov.hk/eia/english/alpha/aspd\\_369.html](https://www.epd.gov.hk/eia/english/alpha/aspd_369.html)

<sup>74</sup> Base on the desktop review of Environmental Permits, also confirmed with interviewee #7.

<sup>75</sup> The Kowloon-Canton Railway Corporation was a statutory body at the commencement of the project, it was later merged with privatized MTR and form Corporation Limited in 2007, which took over the construction and operation of the project.

*requests for information*” (Section 2.8 of Environmental Permit EP-215/2005<sup>73</sup>). It is also worth noting that, before such requirement was implemented to the environmental permit, it was first promised by the project proponent as a response to the concerns over community involvement during the EIA Subcommittee of ACE meeting, and then later the EIA subcommittee recommended that “considerations should be made to further enhance community”<sup>76</sup>.

From the Kowloon Western Link in 2004 to Lei Yue Mun Waterfront Enhancement Project in 2018, a total of 41 EIAs (out of 139 EIAs) required the project proponent to implement measures for liaison work in the environmental permit(s). The nature of the requirements varies from project to project, the most common one is to require the project proponent to set up a liaison group(s) that involve relevant stakeholders. Other requirements that appeared in the environmental permits was establishing an office for liaison purpose, hotline and channels. The count for each type of requirement is summarized in Table 7.1. The details on the detailed requirements and the corresponding EIA/ environmental permits are illustrated in **Appendix 7.1**.

**Table 7.1 Requirement of Liaison Measures in Environmental Permits**

Title	Number of EIA
Community/Stakeholders Liaison Group(s)	24*
Community Liaison Hotline	8**
Community Liaison Office	4
Community Liaison Channel	2
Others	3

\*The number included the five Shatin to Central Link EIAs, which shared the same series of Environmental Permits

\*\*The number included the three Anderson Road Quarry Site EIAs, which shared the same series of Environmental Permits

While the format varies for different projects, the objectives of such measures include facilitation of communication, responding to enquiries and handling of complaints on environmental issues relating to the project. The major difference

<sup>76</sup> The EIA Subcommittee meeting minutes are available from [https://www.epd.gov.hk/epd/english/boards/advisory\\_council/maincontent.html](https://www.epd.gov.hk/epd/english/boards/advisory_council/maincontent.html) (accessed 12 May 2017)



between the use of liaison group(s) and the others is that “liaison group(s)” tends to require a more proactive approach. For example, in the environmental permit of the Development of the Integrated Waste Management Facilities Phase 1, the environmental permit specified that ‘The Community Liaison Group shall take a proactive approach to disseminate information to the local community, promote community cooperation and participation and implement suitable local environmental enhancement works’ (Environmental Permit EP-429/2012). In comparison, ‘Office’, ‘Hotline’, ‘Channel’ and others tend to be more reactive, which respond to incoming complaints and enquiries from the public.

There are isolated cases that the project proponent would commence liaison works voluntarily. The *Kwun Tong Line Extension* (another railway extension project) in 2010 commended community liaison groups despite not required in the Environmental Permit; the *Expansion of Hong Kong International Airport into a Three-Runway System* project set up liaison groups before the submission of EIA report and environmental permit applications.

### **7.3. Background of the Case Study**

#### **7.3.1. Background of the Project**

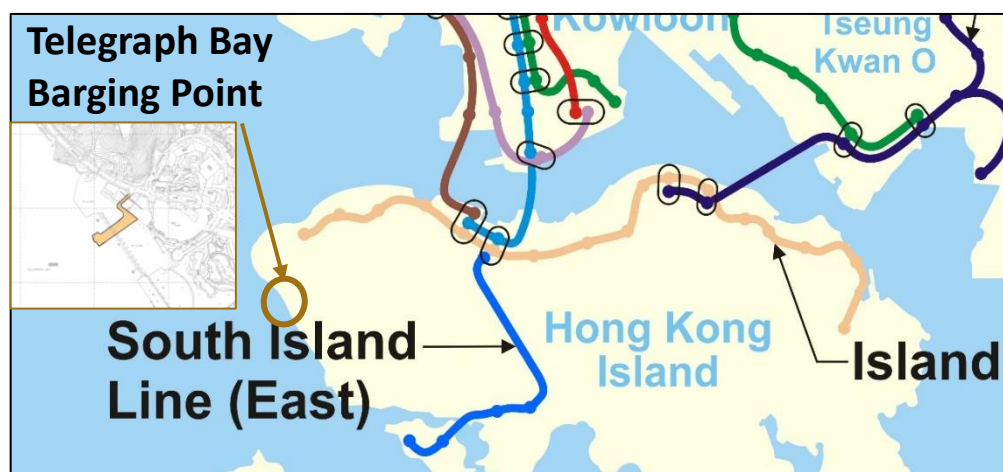
The South Island Line (East) was a railway network extension project that was first proposed in 2000 and got approval in 2009<sup>77</sup>. The project proponent is MTR Corporation, which was privatized in 2000, but the Hong Kong government currently still owns 75% of the Company (MTR Corporation, 2018). It has five stations and the total length of the railway is approximately 7km, comprising 2km of viaduct and 5km of tunnels.<sup>77</sup> During the construction phase, several ‘offsite’ works areas were used. The existing Barging Point at Telegraph Bay is one of the “offsites” that were proposed to be used for the transportation of spoil generated from the tunnel construction activities. The alignment of the project and the location of the barging point are shown in Figure 7.1. The decision of the use of Telegraphy Bay Barging Point was announced in June 2010 through government

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<sup>77</sup> Information from the EIA report

gazette notice, two months before the release of the EIA report.<sup>78</sup> By the time it was announced, it had caught immediate attention and objection from the local community. Collective actions such as petitions<sup>79</sup> and demonstrations<sup>80</sup> were noted before or in parallel to the EIA submission & review process.

**Figure 7.1 Alignment of the Project and Location of the Barging Point**



[Drawing of Railway Alignments from Highway Department (2017), Drawing of the Telegraph Bay Barging Point extracted from the EIA Report by MTR(2010)]

### 7.3.2. The EIA Report and Environmental Permit

The EIA of the project was released in Aug 2010 and later approved in Oct 2010<sup>81</sup>. The project was finished and started service in December 2016. During the EIA review, a total of 45 sets of comments was received by the EPD<sup>81</sup>. According to information provided by EPD through the application of information release under the code on access to information policy, the majority of the public comments were related to potential environmental impacts at the Telegraph Bay Barging Point (TBBP) due to construction activities, i.e.:

<sup>78</sup> Base on information on the gazette, available : <https://www.gld.gov.hk/egazette/pdf/20101422/egn201014223204.pdf> (accessed 12 May 2017)

<sup>79</sup> E.g. Petitions organised by Designing Hong Kong, available from <https://www.designinghongkong.com/forms/pfl/> (accessed 10 May 2018)

<sup>80</sup> Reported in newspaper, such as oriental daily, [http://orientaldaily.on.cc/cnt/news/20100204/00176\\_016.html](http://orientaldaily.on.cc/cnt/news/20100204/00176_016.html) (accessed 10 May 2018)

<sup>81</sup> Information on EPD website

- i) *Air quality impact due to the dump-trucks travelling to and from the TPPB;*
- ii) *Construction dust impact and marine pollution due to the operation of the TBBP;*
- iii) *Change in flow regime due to the TPPB causing an impact on octocoral communities at Telegraph Bay; and*
- iv) *Large amount of tunnel spoils and the requirements of the waste management plan*

(Information provided by EPD, the full reply is attached as Appendix 7.2)

The EIA was reviewed by ACE, and the project proponent was asked to present to the EIA Subcommittee (the 113<sup>th</sup> EIA Subcommittee meeting<sup>76</sup>). During the open discussion, members of ACE enquired about the set-up of liaison groups as a means to enhance communication and trust of the community. The project proponent responded positively and promised that there would be liaison meetings with the affected party. At the end of the meeting, the EIA subcommittee made a recommendation to add a permit condition that the project proponent set up community liaison groups comprising representatives from concerned and affected parties. The recommendation was later adopted in the issued environmental permit (EP-407/2010<sup>82</sup>). Besides the typical functions of facilitating communication, responses to enquiries and handling complaints, the environmental permit also specified that the Construction and Demolition (C&D) materials management plan should include results of consultation with relevant Community Liaison Groups.

### 7.3.3. The composition of the Telegraph Bay Community Liaison Group

The Telegraph Bay Barging Point was one of the five Community Liaison Groups (CLG) set up by the project proponent, along with South Horizon; Admiralty; Wong Chuk Hang & Ocean Park & Chung Hom Shan; and, Lei Tung Community Liaison

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<sup>82</sup> The environmental permits held by the project are available from [https://www.epd.gov.hk/eia/english/alpha/aspd\\_542.html](https://www.epd.gov.hk/eia/english/alpha/aspd_542.html) (Accessed 12 May 2018)

Group. The Environmental Permit requires it to include “*owners’ corporations, management offices, local committees and schools in the affected areas*” but did not specify the details on the composition. Referring to the attendance list on the liaison group meeting minutes, the participants of the liaison group could be categorized into four categories: *District Council Advisor; Local Stakeholder Representatives; Government Representatives; and, MTR Corporation Representatives.*

The District Council Advisor included the elected Southern District Councilor and his assistant. The Local Stakeholder Representatives consist of individuals from six nearby residential premises, Cyberport (a business park), schools, and members of the United Barging Point Taskforce<sup>83</sup>. The Government Representatives consisted of officers from the South District Council, Highway Department, Transport Department and Drainage Service Department<sup>84</sup>. The MTR Corporation Representatives consisted of managers and engineers in the field of environmental, civil engineering, liaison, public relations and project communication disciplines.

Regarding the selection of Local Stakeholder Representatives, interview #2 revealed that the group was formed before the establishment of the CLG. Since the local community had been campaigning against the use of TBBP before the EIA released and the issue of Environmental Permits, the local community had formed a group and had dialogues with the MTR Corporation before the establishment of the CLG. When MTR Corporation was required to form the CLG under the environmental permit, the group was invited to join, and the more active members continued the liaison through the CLG.

#### **7.4. Case Study on the Liaison Process**

The whole liaison process of the Telegraph Bay Community Liaison Group took over four years, which started in Feb 2011 and ended in Sep 2015. A total number of

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<sup>83</sup> Some members joined the liaison group as representatives of the residential premises.

<sup>84</sup> The reason that Drainage Service Department was involved is likely because the Barging Point was established by Drainage Service Department’s Hong Kong West Drainage Tunnel Project, as stated in the Further Information submitted by the project proponent about the selection of barging point, available from [https://www.epd.gov.hk/eia/register/report/eiareport/eia\\_1852010/PDF/further.pdf](https://www.epd.gov.hk/eia/register/report/eiareport/eia_1852010/PDF/further.pdf) (accessed 17 May 2018)

fifteen meetings were held. Following the construction program and events, the attending representatives changed over time, and the focus of the discussion shifted from imposing additional mitigation measures to monitoring the performance and reinstatement of the barging point site. The meetings became less frequent in the later stages, and less local stakeholder representatives attended the meetings. **Table 7.2** shows the dates of the meetings, and the number of representatives attending. A more detailed table is shown in **Appendix 7.3**.

**Table 7.2 Attending Representatives of Telegraph Bay CLG meetings**

Meeting Number	Date	District Councillor	Local Stakeholder Representatives	Government Representatives	MTR Corporation Representatives	Others
1st	24-Feb-11	2	17	3	4	0
2nd	28-Apr-11	2	10	3	6	0
3rd	18-Jul-11	2	9	3	4	0
4th	27-Oct-11	2	14	0	4	0
5th	27-Feb-12	2	13	3	5	0
6th	24-May-12	1	10	3	5	0
7th	26-Sep-12	1	10	3	5	0
8th	13-Dec-12	1	11	3	5	0
9th	13-Mar-13	2	12	1	4	0
10th	13-Jun-13	1	7	3	4	0
11th	10-Sep-13	2	10	3	4	0
12th	29-May-14	2	8	2	4	1
13th	29-Sep-14	2	6	2	3	0
14th	4-Feb-15	2	9	3	4	1
15th	2-Sep-15	2	5	4	4	1

#### 7.4.1. The Development of Environmental Concerns

Before the release of the EIA report, the local community at Telegraph Bay had been objecting to the use of the TBBP by Drainage Service Department's project, due to the disturbance to the local community induced by the heavy vehicles going in and out the barge. When the decision of allowing the South Island Line (East) project to use the TBBP for transporting spoil was announced in a Gazette notice, the actions from the community-focused more on stopping the use of the barging

point. Although environmental issues such as dust and noise being mentioned, they did not go into much detail<sup>79</sup>. The environmental concerns later developed into the comments that are described in Section 7.3.2., highlighting four major issues. Before the commencement of the Telegraph Bay CLG, the Local Community started the liaison with MTR Corporation on the waste management plan and on-site environmental mitigation measures, and the concerns turned to focus more on the minimizing of the environmental impacts and nuisance to the community. In addition to the four issues above, several more issues were identified before and during the liaison meetings<sup>85</sup>. It included: Nuisance from the dump-trucks; Noise impact from the barging activities; and, reinstatement of the barging point after the project. Concerns over social impact were also raised, such as speeding trucks and safety, modification of road junctions and building of footpaths/promenade.

#### 7.4.2. Enquires and Response

This section follows three of the more prominent environmental concerns and explain how these issues were addressed (or not addressed) in the liaison process, i.e. i) the environmental impact and nuisance from trucks movement, ii) the noise impact of barging activities, and iii) the reinstatement of the barging point after use.

##### *Environmental impact and nuisance from truck movement*

The Dump trucks were the major trigger of the collection actions against the use of the barging point. While dump trucks are included in the Air Quality and Noise impact assessment, the assessment only covers the emissions within the project works areas<sup>86</sup>. As such, even though the EIA report did recommend the use of quieter dump trucks for the project<sup>87</sup>, it did not address the major concerns from the community, which is the impact-induced from dump trucks moving along the local roads.

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<sup>85</sup> From the CLG meeting minutes.

<sup>86</sup> As explained in Appendix 3.1, 3.3 (Noise) and 10.2 (Air Quality) of the EIA report.

<sup>87</sup> Chapter 3, section 3.4.1.4 of the EIA report Main Text

From a letter sent by the local community to MTR's project manager and EPD after the 1<sup>st</sup> CLG meeting<sup>88</sup>, the local community made 12 suggestions for MTR to incorporate, six of them were about the dump trucks. The suggestions included the use of maximum payload vehicles to reduce the number of truck journeys, use least-polluting types of vehicles, restrict the operation hours, use GPS enabled tachographs to monitor the trucks' movements, and publish a list of license numbers of vehicles deployed. These measures were mostly referring to the terms that bind the contractors employed by MTR Corporation. MTR Corporation answered these enquiries mostly positively in the 2<sup>nd</sup> Meeting. MTR Corporation replied that the contractors would use 30t trucks as far as practicable, implement Incentive Payment Scheme for the usage of EURO 4 trucks, surveillance of dump trucks with tachographs, and provide the list of vehicles deployed to the CLG<sup>89</sup>.

After such measures were proposed, the CLG was able to keep track and monitor the implementation during its operation. The meeting minutes showed that the CLG was effective in doing that. For example, during the 6<sup>th</sup> CLG meeting, representatives of the MTR Corporation did demonstrate and explain the monitoring and policing in operation. At the 8<sup>th</sup> meeting, the MTR Corporation reported to the CLG group that there were few non-compliance cases were noted, and the non-compliance trucks were removed from the project. However, concerns and complaints of speeding trucks lasted throughout the construction phase, and this issue was never fully resolved (i.e. This issue was discussed in every meeting from the 1<sup>st</sup> CLG meeting to the 13<sup>th</sup> CLG meeting).

#### *Dust and Noise impact of barging point activities*

Dust and Noise impacts induced from the barging point activities were repeatedly discussed in the Telegraph Bay CLG. The dust and noise impacts were covered in the EIA. For dust impacts, the EIA found that the dust impact to the nearby residential premises would comply with the Air Quality Objectives without mitigation measure. Though, installation of the 3-sided screen with top and

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<sup>88</sup> The letter was made available as an attachment to the meeting records of the CLG on the project website, which is not longer accessible since the project website has been offline.

<sup>89</sup> Refer to the presentation material for 2<sup>nd</sup> CLG meeting, the pdf copies were available on the project website (now offline)

provision of water sprays were recommended to contain and control the dust<sup>90</sup>; For noise impact, the EIA found that after the implementation of quieter dump trucks, the noise impact to the nearby residential premises would comply with the construction noise standards<sup>91</sup>.

The EIA findings did not satisfy the local community, with six of the CLG members asked about the environmental impact and questioning whether the mitigation measures were sufficient during the 1<sup>st</sup> CLG meeting. The Local stakeholder followed by requesting a full enclosure at the barging point, restrict the operation hours and monitor the dust and noise level<sup>92</sup>.

At the 2<sup>nd</sup> CLG meeting, MTR Corporation replied that the site operation hours would be restricted, and the barge movements will be limited to 1 to 2 barge loads per day<sup>93</sup>. However, MTR Corporation only reiterated that they would implement the proposed mitigation measure and would further discuss the measures with the CLG members. Despite the conservative replies in the 2<sup>nd</sup> CLG meeting, MTR Corporation's representatives announced that they would implement additional measures. They included adding a hanging dust curtain at the forth side of the Three-sided screen proposed in the EIA report, providing a noise enclosure with roof, and conducting dust and noise monitoring during the operation of the barging point.

Similar to the follow up on trucks movement, the CLG members were able to follow up on the implementation of the measures, such as the location of the monitoring point<sup>94</sup> and the implementation of dust curtains. In the end, the revised noise enclosure design of the barging point seemed to be settled in the CLG meetings. The provision of dust curtain and the overall noise nuisance remained unsatisfied among the local stakeholder representatives. For example, in the 11<sup>th</sup> CLG meeting, a member criticized that MTR Corporation for failing to provide the dust curtain as

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<sup>90</sup> Chapter 10, section 10.2.2 of the EIA report

<sup>91</sup> Chapter 3, section 3.4.1.5 of the EIA report

<sup>92</sup> Mentioned in the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> CLG meeting minutes, and the letter sent to MTR Corporation and EPD by The United Barging Point Taskforce.

<sup>93</sup> Powerpoint presentation materials of 2<sup>nd</sup> CLG meeting

<sup>94</sup> In the 3<sup>rd</sup> CLG meeting minutes



requested; in the 12<sup>th</sup> CLG meeting, a member vented that the dust curtain for noise enclosure was not well implemented and not effective.

*Reinstatement of the barging point after use*

Reinstatement of the barging point was one of the major issues that were raised at the beginning of the CLG. It was partly covered by the Landscape and Visual Impact assessment in the EIA. In the EIA, the landscape impact was assessed as low, as the barging point is adjacent to the existing construction and sewerage facilities of the Drainage Service Department.<sup>95</sup> However, the Local community took a different point of view.

In a letter sent by the local community to MTR's project manager and EPD after the 1<sup>st</sup> CLG meeting<sup>88</sup>, the Local Stakeholders requested the site to be reinstated *"to a condition consistent with a high quality continuing waterfront promenade"* (Point 12 of the letter). They argued that the objective of the reinstatement should not be like the existing construction site/facilities, but an open promenade without the blockage of the existing construction site/facilities.

The details of the reinstatement plans were not discussed until the 10<sup>th</sup> CLG meeting (1.5 years after the establishment of the CLG), and it became much more complicated. The objectives, boundary and maintenance responsibility of the site would need to be confirmed among the parties, including the Drainage Service Department and Lands Department that owned the properties and land of the site. The discussion at the 11<sup>th</sup> and 12<sup>th</sup> CLG meeting revealed that the reinstatement work was beyond the capacity that the CLG could handle. It is worth mentioning that members requested MTR Corporation to arrange a special meeting with MTR Corporation and other government departments about the reinstatement plan after the 11<sup>th</sup> CLG meeting<sup>96</sup> which was declined by MTR Corporation.

The liaison of the reinstatement plan required the local stakeholders to take further actions to liaise with the relevant government department in addition to the CLG. For example, as reported in the 13<sup>th</sup> CLG meeting minutes, the

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<sup>95</sup> Chapter 6 of the EIA report, section 6.6.7.

<sup>96</sup> Reported in the post-meeting notes in the meeting minutes of the 11<sup>th</sup> CLG meeting.

representatives of residents, district councillor office, MTR Corporation and three relevant government departments did an additional meeting to agree on the landscape proposal. Despite the complexity of the subject, the reinstatement design, responsibility of conducting the reinstatement work and maintenance work were sorted out by the end of the CLG meetings the CLG. Referring to the presentation material at the last (the 15<sup>th</sup>) CLG meeting, it showed that the site had been reinstated to a relatively natural state, with new trees planted.

#### 7.4.3. Overall Outcomes

The outcome of the CLG, i.e. the above-mentioned additional dust and noise mitigation measures for trucks and barge, and reinstatement of the site were reflected in the discussions described in the meeting minutes, also the Construction and Demolition Materials Management Plan that endorsed by EPD<sup>97</sup>. The Construction and Demolition Materials Management Plan obligated the MTR Corporation to fulfil the promises in the CLG. Although there were a lot of complaints and criticism throughout the 4.5 years of liaison process, it is noted that the local stakeholders were able to push for many additional measures that would not be in place without the liaison. This observation was also shared with Interviewee #2, who commented that the CLG was helpful for the local community to press for the additional measures. The liaison made MTR Corporation aware that they needed to go beyond the requirement. The interviewee thought that the outcome of CLG was satisfactory and did well in maximizing the migration.

#### 7.5. **Use of Liaison Groups**

The operations of other Community Liaison Groups have been reviewed to obtain a more genuine view of the practices for further analysis. It included other CLGs of the South Island Line (East) (SIL(E)) project, Shatin to Central Link (SCL) projects, and West Island Line (WIL). The meeting minutes of these CLG were screened and

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<sup>97</sup> Available on EPD's website:  
<https://www.epd.gov.hk/eia/register/english/permit/ep4072010/documents/cdmmp/pdf/cdmmp.pdf> (Assessed 25 May 2018)

reviewed. However, these reviews were not as detailed as the case study in 7.3, and no interview was conducted for these cases<sup>98</sup>.

The composition of other CLGs was similar to the composition illustrated in the South Island Line (East) case study. Subject to the construction activities in the vicinity, the subjects and issues that covered in the CLGs were different. For example, the Lei Tung CLG of SIL(E) project and the Hong Kong University CLG of the WIL project discussed a lot about the impacts due to the tunnel blasting. The general observations are described below.

#### 7.5.4. Common Environmental Concerns

Among all of the reviewed CLGs, noise and dust impact are the most common environmental concerns that were raised in the meetings, despite the source of the impacts being different. Some of the CLGs, such as South Horizon CLG of the SIL(E) and Kennedy Town CLG of the WIL enquired about the landscape issues, such as trees removal and reinstatement works.

Compared with the Telegraph Bay CLG, other CLGs tended to be more reactive in responding to noise and dust concerns. For example, the Kennedy Town CLG of WIL also raised concerns over the noise nuisance induced by activities at a temporary barging point like the Telegraph Bay CLG. While the Telegraph Bay CLG raised the issue at the beginning of the liaison, the Kennedy Town CLG raised the issue at the 9<sup>th</sup> CLG meeting, upon received complaints.<sup>99</sup> Moreover, when an issue raised in the other CLGs, it was treated more like a separate event, without much follow up discussion in the following meetings. For example, the above-mentioned noise nuisance at the Kennedy Town CLG was not followed up in the later meetings.

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<sup>98</sup> All of these projects are railway projects by MTR Corporation. Such selection was not intentional but due to various constraints. Other projects have yet to commence construction (as of Aug 2017) or the meeting materials are unavailable. The meeting minutes of the CLGs under the Shatin to Central Link projects are available from the project website: <http://www.mtr-shatincentrallink.hk/en/home/> (Accessed 25 May 2018), the project website of West Island Line had been offline after the project completion (last checked 25 May 2018)

<sup>99</sup> Reported in the 9<sup>th</sup> CLG meeting minutes.

On the other hand, the Telegraph Bay CLG was the only reviewed CLG that seeks and presses for specific mitigation measures (i.e. Extended noise enclosure with roof, GPS enabled tachographs etc.) before the impacts occur. While noise and dust concerns were raised in other CLGs, it is not common to see representatives requesting specific measures. For these other CLGs, the requests of additional measures were more about additional temporary measures such as noise barriers/enclosures (e.g. in the 8<sup>th</sup> Hong Kong University CLG meeting of the WIL, 4<sup>th</sup> Lei Tung CLG meeting of SIL (E)), or change of operation hours (e.g. 9<sup>th</sup> Kennedy Town CLG meeting). These requests also tended to be raised after complaints.

#### 7.5.5. Non-environmental Concerns

It is found that none of the reviewed CLGs focused only on environmental concerns. All of the CLGs used the meetings to handle social impacts that were not covered in the EIA framework. Just as the Telegraph Bay CLG talked about road safety, most other CLGs raised concerns over the traffic and safety issues. The two most commonly discussed subjects among the CLGs were concerns over traffic diversion measures and damage to property/building structures.

It is common to find local stakeholder representatives raising concern over the proposed traffic diversion measures, change to public transport services, or reflect complaints measures. For example, the Sai Ying Pun CLG of WIL and Wong Chuk Hang CLG of the SIL (E) project discussed a lot the traffic diversion measures and their impacts. This type of enquiries was usually responded to by both the project proponent (i.e. MTR Corporation in these case) and representative(s) from the Transport Department that would clarify or pass the comment to the relevant parties to follow up.

Enquiries about the damage of property/building structure were common among the CLG that in the vicinity of 'Drill and Blast' tunnel construction worksite, such as all three CLGs of the WIL Project and the Lei Tung CLG of the SIL (E) project. These enquiries mostly appeared in the form of complaints/reports from the local residents. The function that the CLG could play was very limited. The meeting minutes revealed that the project proponent would only pass the case to the claims adjuster to investigate and follow up (e.g. the 13<sup>th</sup> Lei Tung CLG Meeting of SIL (E)).

The other more common social issues that were discussed in the CLGs included enquiries about worksite management (e.g. Hin Keng CLG and Diamond Hill CLG of the SCL project), pedestrian facilities (e.g. Tse Wan Shan CLG of the SCL project) and Station design (e.g. Kennedy Town CLG of the EIL project).

It is worth noting that in some of the CLGs, social impacts were discussed more than environmental issues, such as Sai Ying Pun CLG of the WIL Project, Admiralty CLG of the SIL (E) project, and Diamond Hill CLG of the SCL project. The Local Stakeholder representatives in these CLGs tended to be concerned more with the social impact due to the construction activities than the environmental impacts.

#### **7.6. The effectiveness of Community Liaison as an EIA Follow Up Measure**

As described in Section 7.2, Community or Stakeholder Liaison mechanisms are set up under the environmental permit system. Community liaison is not a conventional EIA component, and there isn't a clear set up for the objectives of the establishment of Community Liaison in EIA practices. It refers solely to the conditions outlined in the environmental permits, and only serves as a channel that would facilitate communications, respond to enquiries and handle complaints on environmental issues related to the project (referring to the permit conditions summarized in Appendix 7.1). The expected outcome of such establishment was not specified. An interview (Interviewee #7) hinted the Authorities' point of view about the original intent of the use of this instrument. From the experience of the interviewee, the primary aim of asking the project proponent to conduct stakeholder/community liaison was to foster closer communication and working relationship among project proponents, their builders/contractors and the affected publics. The successful intervention, if properly implemented, should provide more speedy relief for adverse impacts, particularly to mitigation noise and dust impacts during the construction phases.

From the case study illustrated in Section 7.4, the liaison in practice functioned well in terms of communication and resolving enquiries or complaints about the environmental impacts. Enquiries that were raised by the local stakeholders were mostly responded to, although may not have satisfied the stakeholders. It also is shown that an active Community Liaison Group was able to press for additional

mitigation measures, concerning the environmental impacts to the community. The effectiveness of community liaison in addressing environmental enquiries and complaints is also connected to the establishment of an environmental monitoring system established in Hong Kong's EIA system, from which the monitoring data were used to investigate and verify the environmental impacts associated with the enquiries and complaints.

#### 7.6.6. Factors Affecting the Effectiveness of CLGs

The establishment of channels for stakeholder liaison did successfully develop working relationships between the local stakeholders and the project proponent. However, it is noted that the actual construction works were conducted by sub-contractors of the project proponent; these sub-contractors did not have a representative in any of the liaison meetings. Moreover, how the sub-contractors would conduct the construction works are bound by the terms of the tender and contracts between them and the project proponent. As such, there is a certain constraint on the choice of measures that can be applied, as it would require a stronger motivation for the project proponent and contractors to go beyond these contractual obligations. An interviewee (#8) for the Telegraph Bay Case Study specifically pointed out that the Telegraph Bay CLG acted early to press for additional measures to be imposed to the contractors through the tenders and contract process. It could be a reason that explained why the Telegraph Bay CLG was able to get more proactive mitigation measures and more intensive monitoring measures than other CLGs.

The differences in outcome between the CLGs and the exceptional case of the Telegraph Bay CLG suggest that the effectiveness of liaison subject to activeness and approach adopted by the local stakeholders. In the liaison process, local stakeholders were mostly working on their own. It is worth noting that in the reviewed Community Liaison Groups, there were no representatives from EPD, the participation representatives from other government departments also tend to be neutral in the discussion. The case study showed that the expertise of the local stakeholder representatives was a key factor for proactive participation. Interviewee #2 commented that there wasn't a clear instruction of the mandate

for their rights. It was up to the community to discover and recognize the window and opportunity to make changes. An expert in the group who has the knowledge of EIA and project management allowed them to be active in the liaison process. Interviewee #8 also commented that the residents would need to understand and work within the environmental protection framework to channel their concerns about impacts and objections into what was legally and contractually possible.

The project proponents were given much flexibility to respond to the enquiries and complaints raised by the local stakeholders. Most of the enquiries that were raised by local stakeholders were not about the legislative environmental standards, but asking the project proponent to raise the bar and introduce further mitigation measures beyond those were required in the environmental permits. It requires the project proponent's will to adopt these measures. As pointed out by interviewee #8, the Community Liaison Group had only the power of persuasion, doing so within the context of what MTR Corporation wanted to achieve. Both, interviewee #2 and #8 commented that the project proponent (ie. MTR Corporation in this case) did not actively seek to address the residents' concerns. Interviewee #8 further commented that the senior managers that made decisions did not attend the meetings before the resident representatives asked specifically the project manager to attend<sup>100</sup>. It caused frustration among the residents' committee members, and they felt that the Community Liaison Group was treated as a bureaucratic process.

Regarding the reason for the project proponent being motivated and adopting the request of further mitigation measures, Interviewee #2 thought that it was ultimately a cost issue. The environmental permit conditions<sup>101</sup> is the motivation that enables the agreements to be reflected in the contracts. Interviewee #4 provided the viewpoint from the project proponent that projects have their own constraints. Project managers would review the contracts and legal requirements

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<sup>100</sup> Verified as shown in the attendance list summarized in Appendix 7.3, the Project Manager of MTR Corporation attended the first three CLG meetings only, and the Environmental Manager attended the 2<sup>nd</sup> CLG meeting only.

<sup>101</sup> In the case study, there was a condition that the Construction and Demolition (C&D) materials management plan should include results of consultation with relevant Community Liaison Groups, as described in Section 7.3.2

to evaluate the consequence of taking no action. If there is no breach of the legal requirements and taking action comes with additional costs, some project managers may be more reluctant to accommodate the enquiries. The willingness to accommodate the enquiries are subject to the budget and resources the project has.

### **7.7. Functions of Stakeholder/Community Liaison in the EIA system**

Section 7.4 to 7.6 illustrated that the stakeholders and community liaisons could be effective in addressing environmental issues after the EIA and environmental permit approval of the project. Stakeholder and community liaison take place after most EIA related decisions have been made. They work in parallel to the EIA-follow up process, which is to enforce the environmental permit criteria and the implementation of recommended mitigation measures. There are three major types of permitting conditions. The first one is about technical compliance criteria that require the project proponents to comply with the relevant legislation and ensure that the project will work in accordance with the information and recommendation described in the approved EIA report(s)<sup>102</sup>; The second type is about the project environmental management, such as employment of Environmental Monitoring and Audit (EM&A) Personnel and qualified expertise. The requirement of setting up Stakeholder or Community Liaison measures could also be viewed as one of this type of conditions. The third type is about documentation and further submissions, with the project proponent being required to submit updated project details and environmental impact mitigation plans to the Director of Environmental Protection for Director's approval or to deposit this with the Director. The Construction and Demolition (C&D) materials management plan mentioned In the Telegraph Bay CLG case study is one of these. The employment of personnel, except the establishment of Stakeholder/Community Liaison Groups, are usually done by a tendering and contracting process by the project proponent. It is neither reported as a subject for

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<sup>102</sup> Summarised from reviewing Environmental Permits from various projects, the approved Environmental Permits are available from [https://www.epd.gov.hk/eia/english/register/aep/all\\_2017.html](https://www.epd.gov.hk/eia/english/register/aep/all_2017.html) (Accessed 29 May 2018)



public concern nor an open process that allows the public to participate. Therefore, the stakeholder/community liaison does not have any role in this. The roles of stakeholder/community liaison tend to be follow-ups of the first and third type of permit conditions. There are four potential functions observed in the case study.

#### 7.7.1. Enforcing Compliance and Implementing EIA Recommendations

Since the environmental permits and monitoring reports are available in the public domain, public members can review and check the compliance without the establishment of liaison measures. However, in comparison to the conventional environmental monitoring mechanism that requires individuals to file a complaint to the project proponent or EPD, the stakeholder/community liaison offered a more active channel to report events of complaint and enquiries. Also, through the establishment of liaison instruments, it provides an interface for informing the local community members on the upcoming activities and contacts in events of complaints.

The case study of Telegraph Bay CLG did show that the community could play an active role in the enforcement of compliance, by engaging the monitoring set up, monitoring and reporting the construction activities, and reviewing the effectiveness of installed mitigation measures. The meeting minutes also reflect that the project proponent took a more active approach in resolving complaints. While reporting of complaints and review of mitigation measures are common among Community Liaison Groups, proactive enforcement in permit requirements and monitoring effort are not common (the Telegraph Bay CLG is the only reviewed CLG actively done that). Nevertheless, the case study shows the potential functions of this instrument in enhancing the enforcement of compliance and EIA recommendations.

#### 7.7.2. Reviewing Further Submissions and Engaging in Approval

It is a rare event that the environmental permit requires any further submission to reflect the outcome of the stakeholder/community liaison or any sort of public participation process. The case that the South Island Line (East) Project required the Construction and Demolition (C&D) materials management plan to include the

results of consultation with relevant Community Liaison Groups makes it the only case that has this kind of requirement<sup>103</sup>. As such, the opportunities for public members to be involved in these further submissions and approval are minimal.

The case study on Telegraph Bay CLG showed that the liaison could play a role in it. As shown in Section 7.4, the community engaged the arrangement in the spoil management. The liaison process optimised the environmental impact mitigation to the local community (e.g. altered the design of the barging point), also reviewing the measures before the Construction and Demolition (C&D) materials management plan was submitted to EPD for approval. It suggests that with the presence of an active community, community liaison could provide quality reviews on further submissions. However, many of these further submissions are technical in nature, and it would require a level of expertise to understand and review them.

#### 7.7.3. Third-Party Environmental Auditing

The establishment of CLGs provides an alternative means to audit the environmental measures and performance during the EIA follow-ups, especially for environmental issues that could not be covered in EIA's technical assessment, such as the mitigation of trucks impacts in the Telegraph Bay CLG. These impacts are outside the scope of EIA and are associated with the work site management and contractors' behaviour that would not be regulated through Environmental Permits. It also provides an alternative point of view on the environmental impacts. While EIAs' technical assessment focus on the compliance of criteria, the stakeholder/liaison enable assessing the impacts from a more personal perspective (i.e. nuisance to the individuals). The case study of Telegraph Bay CLG shows that the concerned members could actively review the environmental measures and programme and provide feedback through the CLG, in order to reduce the nuisance to the community. However, this kind of auditing is not commonly found among the studied CLGs. It appears to depend on the determination of the CLGs members to participate in the auditing.

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<sup>103</sup> Included all Environmental Permits for EIA registered by Jan 2017.

#### 7.7.4. Potential Institutional Learning

The capacity and outcome of CLG practices depend on the efforts and actions among the CLG members. However, the increased interaction among the stakeholders has the potential to facilitate the institutional learning of the project managers. As said by interviewee #4, many organizations have “lesson learned” initiatives. When there is an event that could not be effectively addressed by the existing approaches, the manager would record and share those with other managers. As such, in the later projects, the managers could have better preparation and take precautionary measures, in terms of project management and public communication/interaction. Moreover, some of the projects now tend to start the stakeholder/community liaison before the submission of EIA reports. For example, *the Expansion of Hong Kong International Airport into a Three-Runway System* Project set up Community Liaison Groups after the Project Profile was released in 2012. As such, it may change the scope of EIA and require the project proponent to take local nuisance into account when planning the new project or undertake new EIAs. While there is potential in it, it takes time to see whether such impacts occur.

#### 7.8. **Conclusions**

In this chapter, the roles and functions of public participation during the post-approval stage in Hong Kong were discussed. How and how often public participation would be required through conditions of Environmental Permits was explored. The Telegraph Bay Barging Point Community Liaison Group under the South Island Line (East) project was used as a case study. It investigated how stakeholder/community liaison practices affected the implementation of environmental mitigation measures and minimized the environmental impacts on the local community. The case studied showed that with the active involvement of the community, public participation could press for additional measures and better on-site practices to maximize the mitigation for the community. The examination of other Community Liaison Group operations revealed that active participation, like the case study, is not common. Different local stakeholder groups have

different concerns, with some being concerned more about the social impact of the project instead of the environmental impact.

The case studies revealed that the establishment of a formal channel(s) of stakeholder/community liaison could be an effective measure as an EIA-follow up. It shows that stakeholder/community could play a role in enforcing environmental compliance, review further submission, environmental auditing and potential to facilitate institutional learning. However, the capacity and outcomes depend on the efforts and actions among the stakeholders and project proponent.

## 8. PUBLIC PARTICIPATION AND EIA EFFECTIVENESS

In Chapters 5 to 7, case studies were used to illustrate public participation practices at each of the EIA stages. Chapters 8 and 9 follow these case studies and analyse how public participation affect the EIA effectiveness in Hong Kong. Stakeholder comments obtained from the interviews are used to examine the impacts of public participation practices on the “Procedural Functionality”, “Normative and Legitimacy”, and “Transformative” criteria of EIA effectiveness.

### 8.1. Procedural Functionality Criteria

Procedural functionality criteria refer to the discourse on the intertwining relationships between procedural and substantive effectiveness. Public participation is part of the statutory EIA process. Its primary function is to circulate environmental information, invite the public to comment and incorporate these comments in the project and EIA decisions. However, public participation is more than a stand-alone procedure. Its objectives are to benefit the whole EIA process and improve environmental outcomes. This section examines the procedural functionality outcomes of public participation in Hong Kong’s EIA step by step.

#### 8.1.1. Information Circulation and Comment Invitation

There are two statutory public inspection windows in Hong Kong’s EIA. Both of them start by putting the corresponding documents to the public domain and advertise invitations to the public to comment (for details, see Chapter 4). Before examining whether the comments made influence the project and decisions, it first needs to be asked whether the invitation actually reaches the stakeholders.

Under the current administrative arrangements, the possibility of public inspection would be advertised in a Chinese newspaper and an English newspaper. This advertisement requirement has not been updated since the EIA Ordinance entered into force back in 1998. It thus could be described as dated. It does not follow the social trends on the use of online social media platforms, and it is estimated that only 48% of the Hong Kong population use print publications as sources of news. In comparison, 84% use online platforms (Chan, Chen and Lee, 2017). As such, it

mostly relies on the users to be aware of the availability of public inspection availability.

That aside, the EIA documents available during the public inspection remain in print reports format, even for the online version put on the EIA Register website. Project profiles are only available in pdf format and the EIA report in html and pdf format<sup>104</sup>. The information they contain is unfriendly for users with mobile devices, especially as about 67% of the population use their smartphone for news (Chan, Chen and Lee, 2017). Also, many of the documents, including the main text of the EIA report, are only available in English, despite both English and Chinese being official languages of Hong Kong under the Official Languages Ordinance<sup>105</sup>. This is sometimes criticized as a constraint for public access to information and dissuading the public to inspect documents<sup>106</sup>.

While the approach of information release in the EIA process is reactive, in recent years, some major projects may have come with public relations exercises or adversary campaigns that would provide additional means to spread the news about public inspection availability and EIA through online platforms and social media<sup>107</sup>. These online platform and articles shared through social media also contain simplified or summarised information about the EIA findings. From the number of comments received in the EIA reports (see Chapter 6), some (more controversial) projects could receive over one thousand sets of comments, suggesting that information can reach to a high number of people. However, those possible additional means mentioned above are voluntary and for the concerning project only. There is no guarantee that EIA information will reach all the stakeholders, and it is unclear how much information they receive in the process.

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<sup>104</sup> See EIA Register Website: <https://www.epd.gov.hk/eia/>

<sup>105</sup> Full text of the ordinance is available at: <https://www.elegislation.gov.hk/hk/cap5> (Accessed 15 Jun 2018)

<sup>106</sup> For example, see the submission by The Conservancy Association during the Legislative Council review of EIA mechanism in 2012: <https://www.legco.gov.hk/yr10-11/chinese/panels/ea/papers/ea0523cb1-2261-1-c.pdf>

<sup>107</sup> For example, the Three runway system project have project website: <https://www.threerunwaysystem.com/>, adversary campaign websites e.g. <http://hkdc.org/30victims/about-campaign/> and news were spread through social medias like Facebook and blog posts.

Compared with the circulation of information, the comment submission process is more user-friendly. The EIA register office allows comments submitted by the online portal, email and mails. Furthermore, occasionally concerned groups would also provide their own templates for individuals to submit comments. The wide variety of accepted formats seems to enable effective comment submissions. Referring to the case study in Chapter 6, the received comments covered people from various background and interests.

The stakeholder/community liaison practices have relatively flexible user-focused information releases and circulation. Project and environmental information are circulated to the members with regular presentations before meetings; Members of the liaison group could comment on issues in and after meetings. Depending on the project proponent's managers, the project information and meeting minutes may be available for public access (see Chapter 7). The case studies in Chapter 7 showed that members of the liaison groups have the power to request specific information and comments. However, there is currently no standard or guidelines on the information to be provided in the liaison practices. The circulation of information appears to be restricted to the members of the liaison group. However, the availability of this information to the wider members of the public is uncertain. For example, the South Island Line (East) (the case study in Chapter 7) project website have been taken offline after the project finished construction.

#### 8.1.2. Policing and Enforcement

The EIA Ordinance requires the Director of Environmental Protection to consider the received comments before making decisions (see Chapter 4). The Stakeholder/Community Liaison was set up to facilitate communication, enquiries and complaints' handling (see Chapter 7). However, an important question is what impact these comments have on the decisions and EIA outcomes. The case studies found two major common functions: as an additional measure to police compliance, and as a guide for project development.

Policing compliance here means ensuring compliance of the statutory requirements. While it is observed throughout the three stages of EIA, the focuses and mechanisms are different. During the preparation of EIA reports, the public

inspection of the project profile focuses on determining the scope of technical assessments. The policing effect is more about ensuring that all the required environmental impacts are assessed and presented in the EIA report. During the review of the EIA report, the public inspection focuses more on the validity of the assessment findings. The policing effect is more about ensuring that the EIA report fulfilled the requirements of the EIA Study Brief and Technical Memorandum, also prohibiting the Director of Environmental Protection to approve the EIA if the EIA report does not meet the requirements. After the EIA approval, the function of the compliance check shifts to the enforcement of permit conditions. The public could monitor and ensure that the project proponent implements the environmental measures according to the environmental permit(s).

The outcomes of policing and enforcement build upon the corresponding interfaces between technical criticism and the technical requirements among the three stages of EIA. The interfaces change through different stages of the EIA practices, which offer various opportunities for enforcement actions. Table 8.1 summarised them, based on observations from the case studies in Chapters 5 to 7.

**Table 8.1 Summary of Public Enforcement Interfaces in EIA**

<b>Stage of EIA</b>	<b>Basis of Requirements</b>	<b>Focus</b>	<b>Key Action</b>
Preparation of EIA Report	EIA Ordinance Technical Memorandum	Content of the EIA Study Brief	Warning and Advice
Review of EIA Report	EIA Ordinance Technical Memorandum EIA Study Brief	Compliance of EIA Report	Critical Review and Challenge
EIA Follow-up	Environmental Permit	Compliance of Environmental Impacts	Monitoring

As shown in Table 8.1, during the Preparation of the EIA Report, the approach is precautionary. It aims to influence EIA requirements through the EIA Study Brief.



During the review of the EIA report, this changes to a critical review of the assessment findings, aiming at challenging the technical compliance. In both stages, the EIA Ordinance, including the Technical Memorandum and EIA Study Brief that were given statutory power by the Ordinance. Also, since the EIA Study Brief would become part of the EIA requirements, it helps to connect the policing effect at both stages. It is observed that there are two mechanisms in the EIA system that help to strengthen the policing and enforcement effects. First, the setup of ACE that empowers them to follow-up public comments and makes recommendations on approval and approval conditions. It technically prohibits a non-compliant EIA report to be approved through the process (see Chapter 6). Second, the possibility of challenging the EIA decisions through Judicial Review also seems to strengthen such an effect. As told by interviewee #5, the officers in the Environmental Protection Department are aware of the potential of Judicial Review applications. They would make sure the requirements are followed and facilitate their defence in the Judicial Review.

After EIA approval, the basis for further action falls upon the environmental permit, and the mechanism would be about the implementation and compliance of the environmental permit(s). The whole setting for policing in EIA follow-up is mostly different from the previous stages. Although policing and enforcement work in their own way through the Stakeholder/Community Liaison (see Chapter 7), it is disconnected from public policing and enforcement of the previous stages. First, as the Stakeholder/Community Liaison is mostly between the project proponent and the stakeholder and local community members, the Environmental Protection Department and ACE are not usually involved in its implementation<sup>108</sup>. Also, while the green groups play significant roles in the preparation of EIA reports and the review of EIA Report stages, they seldom involve monitoring and Stakeholder/Community liaison. As suggested by interviewee #1, the green groups have limited resources, and as a consequence, they cannot support active field monitoring and follow-up works. As seen from the case studies, representatives for

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<sup>108</sup> Except the community liaison group meetings of the Integrated Waste Management Facilities Phase 1 project, which is a EPD project and EPD officers do attend the meetings. For details, see [https://iwmfhk.com/en/community\\_liaison\\_group.php](https://iwmfhk.com/en/community_liaison_group.php)

the local communities are mostly residents and district councillors. As such, the members of the public involved in the post-EIA approval follow up may not be the same that participated during the earlier stages. This disconnection makes the public policing and enforcement look like separate processes among the three EIA stages. However, the implication of this disconnection is uncertain.

While in different formats and basis, the public policing and enforcement functions described in this section could effectively ensure compliance of criteria. It, however, does not include whether issues are addressed in a (perceived) acceptable way or if the criteria reflect the actual expectations of the concerned public. This subject is further discussed in Section 8.2.

#### 8.1.3. Comments as Guidance

Section 8.1.2 focused on policing and enforcement to ensure compliance with the EIA Ordinance and environmental criteria. This section focuses on guidance functionality in achieving compliance, and for which the public should provide advice in identifying and selecting appropriate environmental measures. It is closely related to the functions of assuring compliance, as the key drivers of such guidance and quality assurance are also to ensure that the project achieves environmental compliance in the end.

The 'guidance effect' happens when members of the public provide additional environmental or engineering information to the project proponent. Then the project proponent uses this information to revise project elements and to improve environmental outcomes. The case studies show that such an effect is most prominent in the preparation of the EIA report, while limited in the review of the EIA report stage and Post EIA-approval stage. It appears that three major factors determine the outcomes of such guidance: Timing of participation, quality of the provided information and the willingness of the project proponent to make changes.

During the case study of Tung Chung New Town Extension, the environmental information provided by the green groups allowed the project proponent to be aware of the critical environmental issues at an early stage and make changes to

the project plans. In this case, the detailed information was submitted before the land-use zoning works. The early timing provides flexibility for the project to make adjustments. The project proponent was also willing to make compromises in the process (see Chapter 5 for details). However, the conditions change when the project proceeds to public participation at the later stages. Chapter 6 showed that during the review of EIA report stage, the project proponents tend to be defensive against criticism or requests of significant design changes. Besides those projects that are sent back for further assessment, the project proponent tends to stick with the design as presented in the EIA. The guidance effect at this stage is to move to the ACE recommendations and environmental mitigation measures instead of the project design. After the EIA approval, the conditions change again. As shown in Chapter 7, the stakeholder and community liaisons focus on project site management. The guidance effect is, therefore, mostly on the implementation of environmental measures and micromanagement.

The potential of public comments to function as guidance is identified and recognized in the case studies. However, it is also noted that significant influence and changes to the project design and environmental measures are rare to find. The potential and focuses of such guidance effect change through the EIA and project development stages. It requires timely, detailed technical information to be provided to the corresponding decision-makers and the willingness for the decision-makers to make changes. These interlinked conditions may also be connected with the synergy of public participation, project development and EIA that will be discussed in Chapter 9.

## **8.2. Normative and Legitimacy Criteria**

The Normative and Legitimacy Criteria refer to EIA's intent to be a legitimate process in environmental decision making and make justified decisions. This section recalls this intent and examines whether and how public participation helps EIA to reflect social norms and expectations on projects' environmental performance.

### 8.2.1. Environmental Norms and Expectations

Although Section 8.1.2 illustrates that public participation could play roles in environmental policing and enforcement, it does not necessarily mean that the criteria enforced align with the environmental expectations of the concerned public. As illustrated in the previous chapters, the EIA practise in Hong Kong is mostly based on the technical criteria set by the Technical Memorandum. The criteria in the Technical Memorandum are aligned with other environmental legislation and regulations. However, fulfilling the legislative criteria does not seem to be enough in the eye of the concerned groups, especially in the more controversial cases. There are two norm and expectation conflicts identified among the case studies: The scope of “environment” and the environmental standard that should be applied in the EIA.

The EIA Ordinance adopted broad definitions on the term “environment” and “environmental impact”, which literally include any impacts on any component of the earth, people and sites of cultural and historical significance<sup>109</sup>. Although the Technical Memorandum sets out more specific technical requirements, there are grey areas for practitioners and stakeholders to shape the scope of what EIA should work on. Requests of assessment on additional environmental perimeters, especially subjects that are not specified in the Technical Memorandum were commonly observed among the case studies. For example, the request of an assessment on the heat island effect in the Tung Chung New Town Extension Project (see Chapter 5), and an assessment on tourism and health Impacts in the Development of the Integrated Waste Management Facilities Phase 1 project (see Chapter 6).

Similarly, when looking into the objections raised during the EIA process, arguments often revolve around the acceptability of the environmental impacts due to the projects. These arguments appear as two ways (either or both), namely: i) they are not convinced that the project is needed or should be built at that site,

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<sup>109</sup> See Definition in Cap. 499 Environmental Impact Assessment Ordinance, Full text available from [https://www.elegislation.gov.hk/hk/cap499?xid=ID\\_1438403274391\\_002](https://www.elegislation.gov.hk/hk/cap499?xid=ID_1438403274391_002) (Accessed 4 July 2018)

i.e. there should not be any impact in the concerned area, and ii) they are not convinced that the mitigation measures proposed in the EIA are sufficient for the concerned subject(s) (see Chapter 5 and 6).

While public participation allows the public to raise concerns about the scope of environmental assessments and environmental acceptability, the EIA system contains limited conflict resolution mechanisms to resolve the disputes. It relies on the Director of Environmental Protection to make the decision after considering the public comments and ACE's recommendation (if any). There are two issues: First, from the case studies, the capacity and willingness of the Director of Environmental Protection or ACE in resolving these disputes are questionable. The decision-making process of the Director of Environmental Protection and the rationale of his decision is not transparent; however, the Judicial Review of Hong Kong - Zhuhai - Macao Bridge EIA provided some hints. The Judicial Review cases challenged some of the parameters used in the air quality impact assessment and the adopted Air Quality Objectives. In the Director of Environmental Protection's defence, he emphasized that it was reasonable for the EIA to align its standard with the government's air quality policy and its outlined parameters and objectives <sup>110</sup>.

Meanwhile, ACE's review and recommendations tend to focus on technical compliance, mostly in accordance with the Technical Memorandum. As told by interviewee#3, ACE may discuss these disputes, but it is not the main focus of what they are doing, and it is not the role of ACE to address these perceived impacts. Second, there is no direct measure for members of the public to argue or challenge the merit of the Director's decisions (for further details, also see the discussion of Third-Party Appeal right in Chapter 9).

As shown in the case studies, many of the disputes over the scope and parameters of the environmental assessments were not addressed. Especially, it is uncommon to see requests for additional assessments or more stringent criteria to be introduced. The ability of EIA in reflecting the norm and expectations on the environment is linked to whether Hong Kong's environmental policy and the

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<sup>110</sup> The full text of the Judgements are available from <https://www.epd.gov.hk/eia/english/judgement/index.html> (Accessed 5 July 2018)

Technical Memorandum align with the norms and expectations. There isn't evidence that public participation could help in reflecting the norm and expectation through the practices.

### 8.2.2. Decision-making Norms and Expectations

Further to the discussion about norms and expectation on the Environment, it leads to the question of whether the decision-making process reflects the social norms and values. The Legislative Council Panel on Environmental Affairs had conducted a discussion on the review of the Environmental Impact Assessment Mechanism in 2011, which invited submissions from concerned parties. In this context, a hearing session was held. From the submissions, it is noted that several green groups wanted a more direct and two-wayed interaction between the concerned party and the authorities. For example, add public hearing sessions to the EIA practice, increase the transparency in decision making and having the authority replies its response to comments<sup>111</sup>. It hinted that there is a gap between public participation in the EIA and the social norms and expectations. It is observed that the gap includes two levels of conflicts, the transparency and public empowerment of decision-making.

Interviewee #1 believed that EIA practice is not transparent, and the format is ineffective (in addressing public concerns). Regarding transparency, the key argument was that the Director of Environmental Protection does not provide individual responses to the received comments from the public. Therefore, the public would not know the rationale of the decisions, especially if the comments were dismissed. Moreover, it is argued that the public inspection format adopted in EIA is dated. An example raised by interviewee #1 was that the Town Planning

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<sup>111</sup> Referring to the submissions by WWF (HK), Friends of the Earth (HK), The Hong Kong Bird Watching Society, The Conservancy Association, Designing Hong Kong, The Kadoorie Farm & Botanic Garden and the Civic Party. The submitted papers are available on Legislative Council Archive: [https://www.legco.gov.hk/yr11-12/english/panels/ea/papers/ea\\_e.htm](https://www.legco.gov.hk/yr11-12/english/panels/ea/papers/ea_e.htm) (Accessed 2 Jul 2018)

Application allows objectors to present to the Town Planning Board<sup>112</sup>, but EIA does not have an equivalent mechanism.

In other words, while EIA requires the environmental information to be released to the public before decisions are made, it does not fully satisfy the public expectation on decision-making transparency. This dissatisfaction on the format of public inspection practices is also linked to the overall empowerment. As commented by interviewee #3, only changing the format of the practice would not address this dissatisfaction. In the current political context, decisions are made top-down (also commented by interviewee #5). Changing the format alone does not necessarily mean the objector comments would be addressed. This observation echoes the overall political empowerment struggles in Hong Kong (as outlined in Chapter 4 and is further discussed in Chapter 9).

### 8.2.3. The Legitimacy of EIA Decisions

Following the above analysis, public participation in Hong Kong's EIA practice is effective in enhancing the procedural functionality of the EIA but have limited capacity in reflecting the social norms and expectations in environmental decision making. It leads to the question of whether public participation could help build the legitimacy of EIA decisions.

Chapter 6 indicate that public participation has a limited direct impact on the legitimacy of EIA Decisions. After the public inspection, review by ACE and EIA approval, the Integrated Waste Management Facilities Phase 1 EIA remained an environmentally controversial project. The EIA approval was followed by a Judicial Review. Without mechanisms to resolve the environmental conflicts and disputes raised in the public inspection, it would depend on whether the environmental criteria in the Technical Memorandum and existing environmental policies could convince the objectors. Unfortunately, this was not the case. The situation was worsened by the lack of trust towards the experts and authority. In the Judicial Review, the applicant challenged the Director of Environmental Protection that

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<sup>112</sup> For details, see Town Planning ordinance Section 6, Available from [https://www.elegislation.gov.hk/hk/cap131?xpid=ID\\_1438402659157\\_003](https://www.elegislation.gov.hk/hk/cap131?xpid=ID_1438402659157_003) (Accessed 23 Jan 2020)

there were conflicts of interest in approving the EIA and Environmental Permit that was proposed by the EPD<sup>113</sup>. In an open letter the Range Study Centre (2014), a Cheung Chau residents organisation, challenged the independence and interests of AECOM for being the environmental consultant carrying out the EIA while also being commissioned for the Design-Build-Operate contract of the facilities. It showed that public inspection practices have minimal capacity to solve environmental controversies. The implications of such distrust on EIA effectiveness are further discussed in Chapter 9.

Although the direct impact on legitimacy is minimal, there are potential indirect effects that public participation may help to build legitimacy throughout the EIA process. The Tung Chung New Town Extension project in Chapter 5 made a mutual compromise that the adversary campaigns were scaled down after the development was scaled down. The South Island Line (East) project came with some strong adversary actions from the Telegraph Bay community. Later a compromise appears to have been reached, through additional environmental measures pushed through by the Community Liaison Group. It is suggested that public participation in EIA allows the concerns to be resolved through project development and management outside the EIA process, thus reduce the environmental controversies in the EIA decision.

### **8.3. Transformative Criteria**

The Transformative Criteria refer to the objective to encourage learning and change rules in project development and decision-making processes. This section focuses on whether the public could facilitate single or double-loop learning among the stakeholders, such as providing the opportunities for learning and applying learning outcome back to the EIA practices.

#### **8.3.4. Institutional Learning**

The institutional learning here refers to the learning process and outcomes among the EPD, ACE and project proponents. Which is evaluated one by one as follows.

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<sup>113</sup> For details, see the Judgement of the case, available at:  
[https://www.epd.gov.hk/eia/english/content/files/Judgment\\_of\\_18122015.pdf](https://www.epd.gov.hk/eia/english/content/files/Judgment_of_18122015.pdf)



### *Environmental Protection Department (EPD)*

The EPD is the Authority to administer the two statutory public inspections, also determines the environmental permit conditions for the set up of stakeholder/community liaison groups. There is, however, no mechanism for direct dialogues between the EPD and members of the public. During the public inspection of a project profile and the associated EIA report, EPD only receives written comments from the public; During the stakeholder/community liaison, EPD officers do not usually attend meetings<sup>108</sup>. As such, institutional learning in EPD is reactive to public inputs and actions.

Interviewee #5 said that the officers in the EPD were aware of the public's concerns and were afraid of any adversary actions. EPD would seek to avoid troubles in the EIA administration. For example, EPD would instruct project proponents to avoid sensitive environment impact on the public or instruct them to be careful and comprehend the EIA requirements when preparing the EIA report in case that judicial review is expected. It suggests that even without direct dialogues among the stakeholder, the EPD could have institutional learning, by receiving the public inputs and look at them with their own angle of view. Such institutional learning could be said to be administration focused, as the objective is to avoid trouble that would affect their administration.

### *Advisory Council on the Environment (ACE)*

The ACE is the statutory body under the EIA Ordinance that study the EIA reports and give recommendations. The case study in Chapter 6 shows that the members of ACE would follow up public submissions in the ACE meetings, especially on the technical criticism. Interviewees #1 and 3 also confirmed that there are dialogues between green groups and individual members of ACE outside the ACE meetings. It suggests that public participation in the EIA review could work as a form of knowledge exchange. However, it is uncertain whether this kind of knowledge exchange would facilitate institutional learning, as there are two major constraints identified in the settings.

The members of ACE act individually instead of as an organisation. While there are dialogues between the green groups and ACE members, they are limited to individual members that are connected or are willing to meet with the green groups (noted by interviewee #1 and #3). Moreover, members of the ACE are appointed by the Chief Executive of Hong Kong on a 2-year basis<sup>114</sup>. There is no evidence, and it is uncertain whether the knowledge exchange outcomes would pass to the new members after the appointment ends. As such, the institutional learning capacity seems to be highly restricted to individuals within their appointment period.

### *Project Proponents*

The Stakeholder/Community Liaison Group explained and discussed in Chapter 7 is a significant change to EIA practice in Hong Kong. It established connections among project proponents and stakeholders in the EIA follow-up stage. It is observed that such an establishment may have an implication on long-term project management.

As explained by interviewee#4, many organisations have “lesson learned” initiatives that project managers would record and share their experience with other project managers and would take precautionary measures in later projects. As shown in Chapter 7, the community liaison work in the case study did push changes to the project and site management. The experience would serve as a lesson for the project managers. However, since the studied projects were either only finished recently or still ongoing, it would take more time and new projects to examine how these “lesson learned” initiatives would change the project management in the later projects.

It is also observed that there is increased interaction and dialogue between the project proponent and members of the public regarding environmental subjects. As shown in the case study of *Tung Chung New Town Extension* EIA, there were dialogues between the concerned groups and the project proponent (the Civil

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<sup>114</sup> See the membership of ACE , available at: [https://www.epd.gov.hk/epd/english/boards/advisory\\_council/membership.html](https://www.epd.gov.hk/epd/english/boards/advisory_council/membership.html) (Accessed 20 Jan 2020)

Engineering and Development Department in this case). There were even dedicated focus group meetings with these concerned groups, including environmental NGOs and community groups<sup>115</sup>. While Stakeholder/Community Liaison was introduced as an EIA follow up measures, some project proponents also adopted similar measures to consult and connect with the stakeholders and local communities during the EIA preparation. For example, the *Expansion of Hong Kong International Airport into a Three-Runway System* Project started the liaison with the community right after the project was announced<sup>116</sup>. Public participation has become a routine process that the project proponents, especially public works or works by statutory bodies, would conduct extensive public participation exercises throughout the project development and EIA preparation work. These additional public participation activities are usually not specific to environmental issues only and subject to limitations like synergy and conflicts, as discussed in Chapter 8. As told by interviewee #1, some project proponents would meet the environmental NGOs in the design stages. Still, it may not necessarily help to resolve any conflicts, as in many of the cases, the environmental NGOs do not want the project to proceed at all.

Nevertheless, it showed that project proponents had changed their approach in project management in order to reduce public conflicts and meet social demands, which are also observed and reported by practitioners (e.g. Leung *et al.*, 2014, 2013). It is anticipated that the increased interaction among project proponent and stakeholders would continue to change the approach of EIA and project development. It will take time to see what and where this will lead to.

#### 8.3.5. Social Learning

Since this research is not designed to track changes of EIA and stockholders' actions throughout the 20 years of EIA practice in Hong Kong, there is no direct evidence

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<sup>115</sup> Reported in the public engagement reports, the reports are available on [http://www.tung-chung.hk/info\\_centre.php](http://www.tung-chung.hk/info_centre.php) (Accessed 7 Aug 2018)

<sup>116</sup> Referring to information on the project website: <http://env.threerunwaysystem.com/en/clg.html> (Accessed 7 Aug 2018)

to reveal the effect of social learning in this period. Nevertheless, some observations provide hints on the potential and limitations of social learning.

Public participation in the EIA process seems to have a significant impact on the presentation of environmental issues to the general public. As described in Chapter 6, concerned groups and environmental NGOs launch campaigns to encourage members of the public to sign petitions or submit comments during the EIA process to object to projects. Their voice and actions often catch much attention and are reported on in both mainstream media and social media platforms<sup>117</sup>. Some of the commonly concerned environmental issues can be related to the publicised effects of EIA and associated campaigns. The most prominent example is the concerns over the Chinese White Dolphins. The Chinese White Dolphin is one of the most critical environmental issues in Hong Kong and is one of the major issues raised in the EIA of the Expansion of Hong Kong International Airport into a Three-Runway System Project (Attracted the record highest 29133 comments during the public inspection of the EIA report). Before that, the issue had been much publicised in previous EIAs, including the *Liquefied Natural Gas (LNG) Receiving Terminal and Associated Facilities* and *Permanent Aviation Fuel Facility for Hong Kong International Airport EIA* in 2007 that attracted 16392 and 2658 comments during the public inspection of EIA respectively.

While having an impact to publicise the environmental issues in Hong Kong, it doesn't seem to have much impact on the publication of the overall EIA process. While it is unclear how many members of the public participate in the public inspection of Project Profile, the number of comments received during the public inspection of EIA reports is very low. More than 80% of the EIA reports received ten or fewer comments (see Chapter 6). The recorded highest median number of comments throughout the 20 years of practice is just 5.5 (see Chapter 6, Section

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<sup>117</sup> For example, actions against the the Expansion of Hong Kong International Airport into a Three-Runway System is reported in newspaper like Appledaily, available from <https://hk.news.appledaily.com/local/daily/article/20140812/18829261> (Accessed 6 Aug 2018), and spread through Facebook, for example, a post criticizing the EIA approval from The Conservancy Association are shared 171 times. Available from <https://www.facebook.com/cahk1968/photos/a.10151922400906164.1073741825.120372376163/10153299585976164/?type=3&theater> (Accessed 6 Aug 2018)

6.3). For those receiving a high number of comments, there were a high proportion of duplicates. Although there is an increasing trend on the number of comments received by the Director of Environmental Protection, members of the public that follow and review EIA reports is limited to the major environmental NGOs. Other participants are mostly doing on a case by case basis, and seemingly participates only if there are issues of concern/interest.

Moreover, although Hong Kong is relatively small in size with a high density of developments, the chance that the same group of local people gets repeatedly affected by EIA designated projects is low. It also applies to post-approval follow-up. From available information<sup>118</sup>, Admiralty and Hung Hom are two regions that have been involved in more than one Community Liaison Groups, as they are the major railway interchanges thus affected by two different railway projects<sup>119</sup>.

The low proportion of the population that continually participates in the process is certainly a constraint for its capacity in promoting social learning on the EIA system. There may be mutual knowledge exchange among the stakeholders that participate in the EIA process on a routine basis; especially the environmental NGOs having connections with the members of ACE. Even if there is some sort of social learning, it would be limited to a tiny group of people involved. For the general public, public participation practices do not seem to be sufficient to promote social learning without other advocacy initiatives.

#### 8.3.6. Transformation of EIA Practices

It is observed that there are transformative changes to EIA practices. However, these changes are focused on administration and project management but not on policy or legislation.

The increased liaison activities between the project proponent and the public are the most significant change to the EIA practices observed from the case studies.

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<sup>118</sup> Limited to the information is available on public domain.

<sup>119</sup> Admiralty is involved in the Community Liaison Group of Shatin to Central Link and South Island Line (East), Hung Hom is involved in the Community Liaison Group of Shatin to Central Link and Kwun Tong Line Extension. The actual overlapping area that have direct impact to both projects in these regions are however very small, with Admiralty a Central Business District that less sensitive to environmental impact in nature.

Besides that, it is now commonly found as part of the environmental permit conditions (see Chapter 7 and Appendix 7.1), it shows that liaison practices are extended to earlier stages of the EIA. There is no solid evidence that explains this trend. Interviewee #7 said that the liaison requirements are imposed based on need instead of routine practice. However, this trend aligns to the above discussion on the institutional learning among the EPD and project proponents. With more liaison practice experience built up through the years, the EPD and project proponent tend to be more willing to use the liaison as a tool to avoid and prevent public outrage and confrontation.

Meanwhile, there is minimal change to the EIA Ordinance, and there is no update to the technical memorandum. The last update on the guidance notes was in 2010. Even though the Legislative Council made a review on the EIA mechanism in 2011, it did not lead to changes in the legislation and policy. This may be influenced by various political and social factors (see Chapter 9). The discussion of social learning above suggests that social learning tends to focus on awareness of environmental issues rather than the practical issues of the EIA. The increased concerns on the environmental impact do not seem to transform to calls for systematic changes to the EIA practices.

Furthermore, political pressure to push for systematic changes onto EIA seems to be low. On the one hand, as explained in Chapter 4, while there have been democracy movements in Hong Kong, environmental issues are not as common as many other subjects. On the other hand, the social-political context in Hong Kong's may also restrict the capacity of major transformations of the EIA practices, which is discussed in Chapter 9.

#### **8.4. Conclusions**

This chapter examined how public participation practices in Hong Kong fared with regards to the EIA effectiveness criteria "Procedural Functionality", "Normative and Legitimacy" and "Transformation". It is found that public participation led to significant benefits to the procedural functionality of EIA. Although the information circulation methods are dated, it does not seem to hinder a critical review of the EIA documents. The case studies found that the public inputs could effectively

police the project compliance with the statutory requirements. For some of the cases, the external expertise also provided guidance for the project development in addressing environmental issues.

However, public participation does not appear to be able to accommodate environmental norms and social expectations into the EIA. The lack of conflict resolution mechanisms and reliance on the Technical Memorandum in Hong Kong's EIA system restricts the capacity of incorporating public concerns in EIA practices. Thus, many of the concerns raised during public participation remain unaddressed in the process. On top of that, even with public participation practices, the transparency and empowerment it brings are restricted by the wider social-political context. The public's expectations of decision-making remain unsatisfied. As a result, the public participation practices in the EIA have minimal capacity to build the legitimacy of the environmental decisions. However, facilitating dialogues and compromise between the project proponents and opponents and solving some of the environmental concerns on some of the cases may have indirect benefits to build such legitimacy.

The impacts of public participation on the Transformative criteria is limited. It is mainly due to the public participation settings and the opportunities for knowledge exchanges it offers. It seems to facilitate the institutional learning among project proponents and the Environmental Protection Department (as the Authority) in aspects that benefit their works or interests. The institutional learning opportunities of the Advisory Council are limited, mostly restricted to a relatively short appointment. The impacts on social learning are mixed. It seems that public participation in EIA helps to raise awareness of certain environmental issues. Learning of the EIA processes, however, is limited to the green groups that participate regularly.

Finally, it is noted that the public participation outcomes are influenced by contextual factors. There are prerequisite conditions required to bring out the substantive benefits of public participation practices, while these conditions also impose restrictions on its capacity. Chapter 9 follows the discussion and examine these prerequisite conditions and contextual factors.

## 9. CONTEXTUAL FACTORS THAT INFLUENCE PUBLIC PARTICIPATION OUTCOMES

It is recognised that there are prerequisite conditions and contextual factors that influence public participation outcomes. This chapter discusses the implications four conditions and factors that were identified through the case studies, including legislation, civil society, the synergy between EIA and project development, and the wider political and social interface.

### 9.1. Legislation

The EIA Ordinance outlines statutory requirements for EIA, including the public inspection requirements. It also establishes the Authority, the ACE and back up the enforcement of the environmental permit. This section takes a deeper look at legislation and evaluates two specific elements that influenced the public participation outcomes: the Technical Memorandum and ACE setup.

#### 9.1.1. Technical Memorandum

The Technical Memorandum has the statutory power under the EIA Ordinance to regulate technical assessments in EIA, including principles, procedures, guidelines and criteria<sup>120</sup>. The technical requirements outlined in the Technical Memorandum are clear but rigid. The technical details formed the basis for the public to check and challenge the technical assessment findings; however, it restricted the capacity to make adjustments in the assessment settings (such as the parameter and standard it adopt). It is the most prominent in the policing and enforcement aspect of the procedural functions. As explained, “compliance” is a key subject during EIA review and approval. Such compliance mainly comes from the criteria as in the Technical Memorandum. The Technical Memorandum helps the members of the public in building their argument in two ways.

First, the Technical Memorandum is part of the legislation, and thus open for public access. Members of the public can use the associated guidelines as the basis to critically review the methodology and impact predictions, as evidenced by the case studies in Chapter 5 and 6. Second, with its statutory power, it could be used in

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<sup>120</sup> Section 16 of the EIA Ordinance



making grounds for Judicial Review of EIA decisions. All five Judicial Review cases in Hong Kong made reference to the Technical Memorandum in their arguments<sup>121</sup>. As such, the Technical Memorandum shows to be a strong supporting mechanism for technical criticism that project proponent and authority cannot easily ignore.

However, the requirements in the Technical Memorandum are rigid. Most of them haven't been updated for over ten years and are arguably outdated. It limited the overall capability to address public concerns. There are three major constraints identified in the case studies. First, the assessment methodology guidelines define the scope of the assessments, and such scope may not cover all the concerned subjects. For example, in the Tung Chung New Town Extension EIA, the request of conducting an assessment on the Heat Island Effect was not responded to (see Chapter 5). Since temperature is not a topic that is regulated in the Technical Memorandum, there is also little ground for the concerned group to make a challenge against it. Similarly, the concerns over health impact by the Integrated Waste Management Facilities Phase 1 (see Chapter 6) and the concerns over nuisance by the trucks running around Telegraphy Bay in the South Island Line (East) (see Chapter 7) are not included in the Technical Memorandum, leaving the concerns unanswered in the EIA.

Second, some criteria outlined by the Technical Memorandum (i.e. Air Quality, Water Quality, Noise and Hazard) adopt standardised values. For example, the Road Traffic noise criteria for all domestic premises is 70 dB(A) L<sub>10</sub> (1hour)<sup>122</sup>. This approach leads to two problems. As described in Section 8.2.1, the criteria adopted in the Technical Memorandum are not necessarily what the public agrees on, as reflected in the Air Quality Criteria arguments described in Chapters 5 and 6. Moreover, standardised values do not necessarily represent the perceived impact of the receivers. For example, one of the major concerns over the Integrated Waste Management Facilities Phase 1 was the potential health impact on the nearby community caused by air emissions. While related, the pollutant concentration

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<sup>121</sup> For details, refers to the Judgements, available from <https://www.epd.gov.hk/eia/english/judgement/index.html> (Accesses 30 Jan 2020)

<sup>122</sup> Annex 5 of the Technical Memorandum

value itself would not fully reflect the health impact on the community (the impact varies according to the sensitivity and health condition of a person). As a result, the response (which just reiterated the air quality objective compliance) did not manage to address the concerns raised. The focus of the technical memorandum is to bind the conditions on what the authority needs to consider (a comment by Interviewee #6) instead of addressing public concerns. The case studies showed that it could become an obstacle in addressing public concerns when the guidelines and criteria there do not reflect environmental norms and expectations.

Third, the Technical Memorandum adopted a technically focused approach in addressing environmental issues. Interviewee #7 emphasised that under the legislative framework of the EIA Ordinance, there is no provision to specifically require or specify the need to cover social or political aspects of the environmental impact. As such, the EIA itself does not seek to resolve the conflicts and disputes regarding the environmental impact. Without such mechanisms, the overall capacity to reflect and address the social norms of the environment is low (see Chapter 8).

#### 9.1.2. Setup of the Advisory Council on the Environment

While ACE has the statutory power to comment and give recommendations on EIA matters, neither the EIA Ordinance nor the Terms of Reference of ACE have any specified provision on their role in public participation. However, from the case studies, it is noted that the ACE does play several roles in the EIA public participation.

When ACE review the EIA reports, ACE members can follow up criticisms raised by the members of the public. As suggested by interviewee #3, ACE members have access to the public comments before the ACE meetings. They can raise the questions to the project proponent and the authority on behalf of them. By doing so, the concerned public could get the response from the project proponent or the authority (the EIA questioning session is open for public attendance and the

meeting minutes would also be released into the public domain<sup>123</sup>). In some cases, some ACE members may meet with green groups before the ACE meetings (as suggested by interviewee#1; this usually refers to those ACE members that have a closer connection with green groups). Green groups can thus push forward their agenda through ACE members and provide them with information to challenge the EIA assessment findings. The Construction of Cycle Tracks and the associated Supporting Facilities at Nam Sang Wai, Yuen Long EIA in 2013 (see Chapter 6) is an example where green groups' comments were pushed forward to the ACE meeting and got the project on hold as a result. It showed that this kind of follow up works strengthened the policing function played by public participation. However, Interviewees #3 and #6 said that ACE's work is based on the Technical Memorandum and that ACE cannot address issues that are not regulated under the Technical Memorandum, such as the social impacts of the project (as discussed in the above section).

During the review of the EIA report, ACE would give recommendations for the approval decision. These recommendations would usually be incorporated in the Environmental Permit<sup>124</sup>. ACE could recommend additional measures that would help solve the environmental conflicts. The Stakeholder/Community Liaison requirements also come from the recommendations given by the ACE. It means that ACE has some capacity in solving public concerns and enable further liaison practices. This capacity, however, depends on the Technical Memorandum requirement and the formation of ACE. ACE members act individually and represent only themselves. Even though some measures like the recommendation of stakeholder/community liaison could effectively reduce the environmental conflicts during project construction (see Chapter 7), it does not necessarily mean that ACE seeks to use the recommendations to reduce environmental disputes. As interviewee #6 pointed out, there is no unified view among ACE members on how

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<sup>123</sup> See the ACE webpage:

[https://www.epd.gov.hk/epd/english/boards/advisory\\_council/maincontent.html](https://www.epd.gov.hk/epd/english/boards/advisory_council/maincontent.html) (Accessed 30 Jan 2020)

<sup>124</sup> It is not a statutory requirement for the Director of Environmental Protection to incorporate these recommendations. However, incorporating the comments are used as a defence during the Judicial Review as shown all five cases.

to address conflicts between the project proponent and stakeholders. Some members believe that the project proponent should liaise with stakeholders and address their concerns, whilst others and the authority do not necessarily share the same vision. It echoes with the discussion of institutional learning of ACE. In this context, the formation and 2-year appointment period of each member does not facilitate long-term institutional learning. It would always rely on individual members to evaluate and decide whether or how they would use the recommendations to address public concerns.

Lastly, it is noted that the formation of ACE has the potential to facilitate social learning, despite it potentially not facilitating the institutional learning within ACE itself (see Chapter 8). As mentioned above, some ACE members have a connection with green groups. They would have regular meetings with those groups, and there is knowledge exchange in these meetings. Similarly, some ACE members are professors/ lecturers in universities. The broad background of ACE members seems to have the potential to bring knowledge of EIA implementation to the wider public. However, the case studies and interviewees could not provide solid evidence about the outcome of this kind of knowledge transfer, which would require further, specified study to investigate.

## **9.2. Civil Society**

The strength of public participation in Hong Kong's EIA is its procedural functionality, circulation of information, policing and providing guidance (see Section 8.1). Starting from the preparation of the EIA report to the review of the EIA report and follow up, external expertise and knowledge on the environmental subjects played an important role. For example, the ecological survey data provided by the green groups in the Tung Chung New Town Extension was crucial for influencing the EIA study and the project development (see Chapter 5). It is noted that the availability of such external expertise and knowledge relies on the capacity of civil society.

As noted in Chapter 6, major environmental NGOs in Hong Kong would review the project profile and EIA report regularly; meanwhile, the median number of comments received on an EIA report from 1998 to 2017 is just two. The number of

comments hints several issues. First, Hong Kong is a compact city, yet multiple NGOs are established here. Years of work provided them with the expertise and database on the environmental background in Hong Kong, such as the database the green groups used for their submissions to the Tung Chung New Town Extension project (see Chapter 5). Their experience, expertise and knowledge facilitate regular policing and guidance functions in Hong Kong's EIAs. However, the low median number of received comments also means that it is beyond the capacity of them to cover all the EIAs conducted in Hong Kong. As a result, those EIAs that receive attention and third-party review only consist of a relatively small portion of the total number of the EIAs. For the EIAs that do not receive any attention, none of the above procedural functionality outcomes would happen.

Besides the number of EIAs that could be covered, the procedural functionality could only apply to some of the environmental subjects. While the major environmental NGOs have expertise in reviewing technical assessments, each of them has its own vision and focus. They tend to focus on the subjects they are concerned about. As shown in Chapters 5 and 6, the more commonly concerned environmental subjects in the EIA report are ecology, fisheries, air quality, water quality, landscape and visual impact. There are other subjects that are covered by EIAs but rarely receive public attention and written comments (e.g. Land Contamination). Meanwhile, noise is a common concern of the local community during EIA follow up. The presence of external expertise on noise impact and mitigation among the local community is not common (as commented by interviewees #2 and #8). Moreover, as suggested by interviewee#1, most of the environmental NGOs in Hong Kong are more focused on the review of the EIA report. They do not have the capacity for field monitoring in EIA follow up.

All of the above suggests that the procedural functionality of public participation depends on the capacity of civil society. Only in the presence of both, expertise and concerns on a subject could make the EIA benefits from public participation through its potential in procedural functionality.

### 9.3. The Synergy of Public Participation windows

During its development, a project may come across public participation windows outside the EIA process. For example, a planning project would require the drafted plans to be exhibited for public inspection during the planning application process<sup>125</sup>. Public Works projects that need approval from the district council and/or legislative council would allow the members of the public to provide input through the district or legislative council. Other voluntary public participation or engagement activities have also become more common, such as an exhibition booth, dedicated project website, and others. Table 9.1 listed the public participation windows offered, in parallel to the EIA process. Including the two statutory public inspection windows during the EIA process, a project could have more than five public participation windows. It is noted that the multitude of public participation opportunities (within and outside of the EIA process) can play a significant role in bringing out procedural functionality, while the lack of official synergy among these opportunities may limit its capacity in influencing the outcomes.

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<sup>125</sup> Public Inspection of drafted New or Amended Outline Zoning plan is a statutory Requirement under Cap.131 Town Planning Ordinance. Individuals that submitted comment would be invited to present their views at the Town Planning Board Meeting.

Table 9.1 Public Participation Windows besides the EIA

		Project Type		
		Public Infrastructure Works	Planning Projects	Private Works
Other Public Participation Windows	Statutory		<ul style="list-style-type: none"> <li>• <i>Town Planning Board-Planning Application Public Inspection</i><sup>125</sup></li> </ul>	
	Non-statutory	<ul style="list-style-type: none"> <li>• <i>Public Engagement Activities</i></li> <li>• <i>Discussion in Legislative Council*</i></li> <li>• <i>Discussion in District Council**</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Public Engagement Activities</i></li> <li>• <i>Discussion in Legislative Council*</i></li> <li>• <i>Discussion in District Council**</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Public Engagement Activities</i></li> </ul>

\* Public works would be discussed in relevant committees and Panels, members of the public can contact or seek help from the council members. The committees and panels can also host public hearing sections if necessary. For example, the Shatin to Central Link project had a public hearing section at the Subcommittee on Matters Relating to Railways<sup>126</sup>.

\*\* Public members could contact and seek help from the members of district council directly or through the corresponding district office.

The case studies showed that the concerned members of the public could utilise different available public participation windows in pursuing their agendas, bringing their concerns to cross processes. The green groups of the *Town Chung New Town Extension* project engaged in the two public inspection windows of the EIA process, the three stages of public engagement activities, wrote to bureaus and submitted comments in the planning applications later; The *Integrated Waste Management Facilities Phase 1* project conducted a liaison with the Islands District Council during

<sup>126</sup> Reported in the Legislative Council Paper, available from: [http://www.legco.gov.hk/yr10-11/chinese/panels/tp/tp\\_rdp/minutes/rdp20101104.pdf](http://www.legco.gov.hk/yr10-11/chinese/panels/tp/tp_rdp/minutes/rdp20101104.pdf) (Accessed 24 Jun 2018)

the project development<sup>127</sup>; the concerned community members of the *South Island Line (East)* project took actions during the EIA review and contacted members of the legislative council for help before the community liaison process. With the environmental concerns brought across different processes, project proponents are also required to address the public's environmental concerns beyond the conventional EIA framework. The outcome of the Town Chung New Town Extension project is the most significant among the studied cases. Through the green groups' participation in both, EIA and planning processes, they practically connected the ecological impacts to the planning parameters and found the environmental solutions through altering the land use plans.

However, these public participation opportunities are separated practice with minimal official connections. Since the public participation activities are conducted by different authority or organizations, the response to public comments subject to the discretionary power of the corresponding authority and organization. While it appears that the public can choose to engage any of them, it also created challenges for the public in pushing forward their agendas. The nature of each of the public participation activities is different, and the corresponding authority or organization would respond differently. The public may not understand the difference and select the most appropriate channel for them.

As suggested by interviewee #4, when available channels were opened, the public tended choose the one they thought was the most convenient or easiest way to participate. In which, green groups and pressure groups are more familiar with the process thus would call authorities for enquiries and complains; other public members more commonly seek help from the district council. District Councilor(s) could act as representative(s) of the individual(s). They could raise concerns and helps in dealing with authorities and project proponents, also put the issue on the agendas of district councils. However, the agenda of individuals may not align with

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<sup>127</sup> Reported in the project website. The details of the works are however not available. : [https://www.epd.gov.hk/epd/english/environmentinhk/waste/prob\\_solutions/WFdev\\_IWMF.html](https://www.epd.gov.hk/epd/english/environmentinhk/waste/prob_solutions/WFdev_IWMF.html) (Accessed 29 Jun 2018)



each other<sup>128</sup>, and it depends on how the district councillor(s) handles queries. As pointed out by interviewee#2, the district councillor(s) could use the district council to protect or strengthen the protection of the residents, but the district council is what could be called a blunt tool, as district councillors are not necessarily experts in the concerned subject or EIA

In short, while Individuals have an option to choose which channel or window to engage in, the outcome may not be the same if they proceed through a different channel. The lack of synergy among the public participation windows means that it would rely on the public to connect their concerns themselves.

#### **9.4. Pollical and Social interface of EIA**

EIA practices and outcomes are inevitably influenced by their political and social interface. As discussed in Chapter 8, the political and social context in Hong Kong have greatly compromised the normative and legitimacy performance of public participation practices, and have restricted the space of the transformation of the EIA process to address emerging social concerns.

##### **9.4.1. Impacts on Legislation**

The legislation is the most direct reflection of the political context. The dispute of public empowerment on challenging EIA approval is hinted at in the debate of Third Party Merit Appeal right during the legislation process back in 1997. In the debate of the proposal on the third party right to launch a merit appeal on EIA decision, Legislative Council Paper CB(1)413/96-97(01) explains the Administrative position. The Administration considered that the measures proposed by the Bill had already ensured that the public's concern about the environment would be taken into account in the EIA decision making. Thus, the administration did not agree that it was necessary to provide a third party appeal system, also as to avoid potential "Third Party Grievance" through the Third Party Merit Appeal mechanism. It showed the stance of the administration in the light of development and public

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<sup>128</sup> Observed by interviewee#4, as these works are not open, there isn't empirical evidence that could show whether or how these cases were handled.

empowerment twenty years ago. Similar arguments still stand today. Hong Kong remains an illiberal democracy system. Sectoral interests have a strong political influence, including the legislative council (see Chapter 4). The representation of sectoral interests in the legislative council discourages pushes for an update of the EIA Ordinance. Members of the legislative council require the Chief Executive's written consent to introduce bills relating to government policies<sup>129</sup>. With the functional constituency and current distribution of seats in the legislative council, there are also concerns that the amendment of the ordinance would lead to loosened development control instead of strengthening it (from Interviewee #1). As such, the EIA legislation and policy seems to be in a lockdown situation that restricts the capacity of transformative change.

#### 9.4.2. Impact on the Overall Capacity in Addressing Environmental Conflicts

The restriction of citizens' political power also applies to the setting of policy priority and environmental objectives, which in general, the policies priorities are determined by the high government officials. Members of the public have limited opportunity to influence them (see Chapter 4). Among the case studies, it is noted that the dispute of the need of a project, site selection and the adopted environmental objectives are commonly raised during the public inspections (see Chapters 5 and 6). Regarding the "green light" and site selection of a project, especially as shown in the more controversial cases, there are limited opportunities and empowerment for the public to raise a challenge. Many of the environmental disputes remained unresolved in when the EIA submitted for approval. The implication on the EIA is that people would use the windows offered in the EIA process to push forward their project agendas (as commented by interviewee #6). As commented by interviewee #3, many members of the public voicing concerns about a project in EIA generally means they disagree with the "Need" of the project. While the EIA requires the project proponent to justify the need for the project, that "need" is not decided by the EIA. Similarly, as reflected in the ACE meetings during the Integrated Waste Management Facilities Phase 1, EIA can challenge the

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<sup>129</sup> The Basic Law of Hong Kong, Article 74

environmental compliance but cannot challenge the merits of the site selection decision (see Chapter 5).

Regarding the environmental criteria, the political context seems to worsen disputes and conflicts on environmental acceptability. EIA practices in Hong Kong emphasise environmental compliance as in the Technical Memorandum. However, with limited political empowerment, members of the public have restricted power to influence environmental criteria in the Technical Memorandum (as it requires changes to the legislation and face the same difficulties as changing the EIA Ordinance as shown above). As such, these disputes and conflicts always get into the EIA process. Adopting the environmental criteria in the Technical Memorandum is the sources of many environmental disputes in the EIA. As shown in the case studies in Chapter 6 and Chapter 7, these disputes are usually left unaddressed in the EIA, and the criteria as adopted in the Technical Memorandum have little capacity to convince objectors.

At the same time, there has been wide distrust of the government, experts and business sectors with regards to environmental policy and governance. (Tsang *et al.*, 2009; Walker and Hills, 2014, also see Chapter 4). Such distrust is reflected in EIA practice. There is observed distrust upon the EPD (including the Director of the Environmental Protection), ACE, and the environmental consultants. Such distrust can be particularly prominent in controversial projects. For example, after the EIA approval of the *Expansion of Hong Kong International Airport into a Three-Runway System* project, green groups accused the ACE of taking a softened stance in the review of ecological impact and measures (see Ng, 2014).

Among the key actors in the EIA practice, the distrust of the environmental consultants seems to be the strongest. During the Legislative Council review of EIA mechanisms in 2012, multiple submissions included concerns over the indecency and conflicts of interests of the environmental consultants. The most common argument is that the environmental consultants are commissioned by the project proponent, which would have the interest to prepare the EIA in a way that favours

the project approval<sup>130</sup> (i.e. the assessment findings are biased). This distrust has an odd interface with public participation practices. The perceived bias of the EIA prepared under commissions of the project proponent, in some way, contradict the findings that the public participation practices in Hong Kong could effectively play the role of policing EIA compliance (see Chapter 8). It also means such policing and enforcement actions through public inspection was unable to build the trust of EPD, the ACE or environmental consultants.

## 9.5. Conclusions

Public participation outcomes are influenced by various factors and have prerequisite conditions that needed to be fulfilled. The legislation is crucial for determining outcomes. As observed from the case studies, the Technical Memorandum in the EIA Ordinance enables the members of the public to effectively police compliance while restricting the flexibility to address public concerns. The statutory establishment of the Advisory Council helps to bring forward the concerns to the project proponent, but this has limited capacity to ensure they are addressed. Civil society played a prominent role in public participation; however, it requires external expertise and active participation to be beneficial.

Moreover, the overall political and social interface is an important factor that affects the legislation and the capacity to resolve conflicts in EIA. The illiberal political system in Hong Kong restricts the development of EIA and public participation. There is wide distrust of experts and authority restricting the capacity of achieving normative and legitimacy benefits to result from public participation.

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<sup>130</sup> See submissions by the Civic Party, Friends of the Earth (HK), Green Sense, Greeners Action, Greenpeace and The Conservancy Association, the submissions are available from Legislative Council Archive: [https://www.legco.gov.hk/yr11-12/english/panels/ea/papers/ea\\_e.htm](https://www.legco.gov.hk/yr11-12/english/panels/ea/papers/ea_e.htm)

## 10. SYNTHESIS

Following the discussion of empirical findings of the case studies, this synthesis chapter compares these findings with the international discourse to answer the research questions on “Does public participation contribute to the effectiveness of EIA” and “How does public participation contribute to the effectiveness of EIA”. Then it follows with a discussion of results and any unanswered questions.

### 10.1. The Functions of Public Participation in EIA

In this section, the empirical findings in Hong Kong are cross-examining with international experience and discourse. Differences between Hong Kong and practices elsewhere are discussed. “Procedural Functionality”, “Normative aspects and Legitimacy” and “Transformative” criteria are elaborated on.

#### 10.1.1. Procedural Functionality

Information provisions, filling of information gaps, quality assurance and problem-solving are commonly recognised benefits of EIA and public participation practices (e.g. O’Faircheallaigh, 2010). For arriving at a more accurate description, these functions are re-organized into information circulation, policing and guidance, also differentiating them from each stage of EIA.

Both the term “Information Provision” and “Information Circulation” describe important notions of information flows. However, there is a difference between the two. “Provision of Information” tends to suggest that information is provided from a centralised source. For example, O’Faircheallaigh (2010) said that in the EIA practices, decision-makers provide stakeholders with the details of the proposed projects and their expected impacts. In other studies, it also mostly referred to the effectiveness in allowing the public to access relevant documentation and information (e.g. Hartley and Wood, 2005). In the Hong Kong case studies discussed in previous chapters, while the information provided by the EIA authority was a major source of information, interaction among members of the civil society made for decentralized information flow. For example, project proponent provide additional information to the stakeholder through the public engagement and liaison activities. Concerned groups also publish user-made contents to the wider

public. These changes and additional information sources are in line with changes in the way social communication is happening, which today is dominated by smartphones and social media platforms. This change has speeded-up and extended the reach of environmental information. Whilst the use of the latest information technology is discussed in the international professional literature (e.g. To and Chung, 2014), the decentralization of information flows only get marginal mentioning. As a consequence, It is currently unclear whether such decentralization is observed in other world regions.

The policing and guidance functions observed in the Hong Kong cases align with the objectives of filling an information gap, quality assurance and problem-solving as discussed in the literature, with a focus on observed outcomes and mechanisms. The observed policing effect means ensuring compliance. This 'compliance' includes the effect of ensuring the Authority's EIA decisions will comply with the statutory requirements (or to prevent the Authority to approve a non-compliant EIA). In the literature, filling information gaps and quality assurance are said to be important for enhancing the merit base of the decision. It includes the validation of the quality of the assessment (Del Furia and Wallace-Jones, 2000), and ensure that all relevant impacts are considered before the final decision (Nadeem and Fischer, 2011). It also serves as a basis for being able to contest the proponent information (O'Faircheallaigh, 2010). In Hong Kong, it was found that while the merit of decisions is still one of the concerns raised, these concerns were shifted to the examination of compliance. In other words, public participation in Hong Kong's EIA' in practices focuses on whether the required information was presented (and thus be considered in the process) instead of whether the decisions were based on comprehensive and best available information as is suggested in the professional literature. This difference may be explained by the unique social-political context of Hong Kong. The legality of the EIA tends to be the major concern of authorities, and in the process most comments from the public are interpreted as challenges of the legality .

The guidance effect observed in the case studies is similar to the objective of problem-solving suggested in the international professional literature, with a

slightly different focus. In literature, problem-solving is often said to include identifying environmental problems, harnessing local knowledge, understanding perception, then use public participation as a mean to resolve identified problems and conflicts (Del Furia and Wallace-Jones, 2000; Glucker *et al.*, 2013). In Hong Kong, public input was distinguished from technical information and cognitive/values. Furthermore, the guidance effect refers to technical inputs, in which the utilisation of external knowledge is emphasized and avoid/address problems through technical means.

A differentiation between the two types of inputs is not commonly elaborated on in the international professional literature. Although mentioning of utilization of local knowledge is common, it mostly refers to technical and cognitive knowledge together (e.g. Becker *et al.*, 2004; Webler and Tuler, 2006). Taking a more in-depth look, the guidance effect here was of a different nature. In Hong Kong, public participation inherited the characteristics of the technical-focused EIA approach. Local knowledge triggering the guidance effect with highly detailed technical information, which sometimes is equivalent to the information provided by the consultants or project engineers. This has given them an upper hand in the process. Also, the outcomes are more about shaping the technical assessment and environmental design than understanding perception or resolving conflicts as suggested in the literature (e.g. O'Faircheallaigh, 2010; Glucker *et al.*, 2013). This difference may be related to the EIA setup and unique social-political context of Hong Kong. The civil society in Hong Kong is well developed. However, concerned groups or NGOs having similar levels of expertise to consultancies and authorities elsewhere is rare (e.g. Fagan and Sircar, 2010). Meanwhile, the capacity of resolving conflicts on perceptions within the EIA system is limited (further discussed in Section 10.1.2). This may encourage shifting attention to technical issues.

Besides the observed outcomes, the case studies noted that the guidance effect occurs throughout the EIA and project development process, from preparation to follow up; however, the subject and potential for guidance change throughout the time. The synergy between public participation and EIA, project development and

other parallel processes play a role in influencing the decisions. This synergy is similar to Kingdon's (1995) "policy primaeval soup" and "policy window" models, where policy windows open when separate streams of problems, policies and politics connect. The public participation practices seem to have the potential to connect problems to different "streams" and foster a solution to be made. This observation is similar to the discussion about the integration of environmental assessment and planning. Especially, it echos some of the findings from van Stigt, Driessen & Spit's (2013) study, which suggested that professionals could reframe objectives and negotiate, using the opportunities provided by decision windows. However, this concept has not yet been widely discussed, and the specific synergy in public participation does not seem to be mentioned in the literature.

#### 10.1.2. Normative and Legitimacy Functions

The case studies in Hong Kong suggested that public participation has difficulty in addressing the disputes on the perceived environmental acceptability and merit of the decisions. Public participation has limited capacity in building the legitimacy of decisions. Whilst, on the one hand, this finding in some way aligns to the suggestions made in the international professional literature and previous empirical studies, on the other hand, it is also slightly contradictory.

Public participation practices are expected to provide an opportunity for the acknowledgement of pluralism and representation, also to allow groups of different interests to resolve conflicts (O'Faircheallaigh, 2010; Glucker *et al.*, 2013). In this context, cases in Hong Kong showed that public participation could advance pluralism and representation. Groups with different interests were able to voice their concerns and demands. A question arising, though, is why the conflicts were identified but not addressed. Comparing to the challenges of technical robustness as discussed in Section 10.1.1, the conflicts here are more on the side of perception and cognitive values. Other international studies found that conflict in the EIA process is common, but the outcomes of environmental conflicts resolution are mixed (Shepherd and Bowler, 1997; Del Furia and Wallace-Jones, 2000; Nadeem and Fischer, 2011; Elling and Nielsen, 2018). Here, conflict resolution outcomes



depend on the willingness and the existence of suitable approaches in addressing these concerns (e.g. Shepherd and Bowler, 1997; Del Furia and Wallace-Jones, 2000; Nadeem and Fischer, 2011). This is similar to the influence through liaison between the project proponent and members of the public in Hong Kong. However, the cases in Hong Kong also showed another type of dispute.

As explained in Chapter 8, one of the sources of the major environmental disputes in Hong Kong's EIA is that it is unable to settle disputes on the environmental criteria that the EIA decisions should be based on. With regards to this, there are similar findings in international experience. Elling & Nielsen's (2018) study on the City Circle Line found that noise regulation and impact could not satisfy the affected citizens. The bureaucratic discretion among higher government made public participation a technocratic and legalistic process. Elling & Nielsen's (2018) study also showed that it requires political actions from high government and parliament to address this type of disputes. The cases in Hong Kong are more complex, as the environmental criteria adopted in the EIA are bound by legislation. However, under the political system, the public in Hong Kong has limited power to influence legislation. Similarly, it was unable to resolve the dispute about transparency.

Regarding the building of legitimacy, public participation was suggested to help develop mutual acceptability of the project and gain legitimacy in the process (Shepherd and Bowler, 1997; Glucker *et al.*, 2013). Hong Kong's public participation in EIA seems to have minimal effect on building the legitimacy of the EIA decision, due to unaddressed conflicts, unsatisfactory transparency in decision making and low trust in government and experts. However, the difficulty in building legitimacy in IA through public participation is also found in regions with differing contexts, including in other illiberal democratic systems and democratic systems (e.g. Nadeem and Fischer, 2011; Pope *et al.*, 2018; Elling and Nielsen, 2018). It is therefore suggested that this problem is not bound by the political system, and is associated with factors in the EIA and public participation design.

There are two observations from the international professional literature that may explain this problem. The public participation design in IA is insufficient to provide

deliberations in decision making. First, the current administration of EIA does not promote collaboration and often falls back on technocratic approaches that do not understand the perception of society (e.g. Lockie, 2001; Doelle and Sinclair, 2006). Second, the IAs themselves have limited influence on the project, especially major infrastructure projects and those decided top-down. Here public participation and IA have limited capacity to alter the decision-making structure that is dominated by powerful actors (Rozema and Bond, 2015; Pope *et al.*, 2018; Elling and Nielsen, 2018). The limited capability in building legitimacy through public participation questions the rationale and positioning of public participation in the IA model, as examined in Section 10.2.

#### 10.1.3. Transformative Function

The case studies do not provide much evidence on the learning outcomes through public participation in EIA. The statutory EIA system in Hong Kong does not have provisions to facilitate dialogues among stakeholders. Nevertheless, it is noted that public participation practice provided the key stakeholders, i.e. the authority, project managers and the major environmental NGO, opportunities to have dialogues that could facilitate learning outcomes. Although there are barriers in the institutional settings and learning tends to be limited to certain groups, this finding aligns with other previous studies (e.g. Cashmore, Bond and Cobb, 2008; Jha-Thakur *et al.*, 2009).

There are, however, two observations that raise questions with regards to the discourse held in the international professional literature. First, it is noted that the part of the population that actively participates in the EIA process is very small, and is limited to the major environmental NGOs and those affected by the project. Besides the major environmental NGOs, individual members of the public tend to participate on a case by case basis. Similar observations were made in other world regions (Wiklund, 2011). Second, most of the individuals participating in EIA tend to focus more on the environmental subject(s) of concern rather than the EIA process. Their inputs were mostly making submissions or petitions to voice their concern instead of seeking negotiations with the authority or project proponent. As a result, learning outcomes seem to be more significant in the awareness of

environmental problems. Meanwhile, they do not seem to attract more members of the public to participate in the EIA process actively.

The above observations indicate that the capacity for wide, full-scaled social learning through IA public participation at this moment might be limited. This is in line with the argument that the current public participation practices adopted in IA do not facilitate dialogue and collaboration that are needed for effective learning (Verduzco Chávez and Bernal, 2008; Diduck *et al.*, 2012). However, it also showed that some scepticism on the potential benefit of the learning outcome is needed and that public participation approaches need to change to facilitate closer communication and interaction among the stakeholders (e.g. Sinclair and Diduck, 2017). It would require other means to encourage more individuals to take part in the IA process and take a deeper involvement.

## **10.2. The Rationale and Positioning of Public Participation in IA Models**

In the international professional literature, three major rationales and positions of the objectives of public participation in EIA theories are found. Public participation is seen as an intrinsic right and value in a democratic society; furthermore, there are technical functions as in the technical rationality model; and finally, there are social-political functions in the civic science model. The philosophy positioning public participation in IA currently has three problems. First, The models of IA themselves were established years ago. Most current works still refer to Bartlett and Kurian's (1999) and Cashmore's (2004) models. These models do not cover many of the expanded IA principles and objectives developed since then. Second, there is limited and insufficient empirical evidence that back up such positionings, especially among the expanded IA principles and objectives. Third, the implications of public participation practices are rarely discussed in connection with these models. This section thus examines the rationale and positioning of public participation as put forward in these models.

### **10.2.4. Intrinsic Democratic Values of Public Participation**

The intrinsic values of public participation are associated with the principles of political rights in a democratic society. They include elements of the rights for

citizens to be involved and a right to influence. The two elements are usually discussed at the same time in the discourse of public participation. However, the illiberal democracy system in Hong Kong provided an opportunity to examine the two elements separately.

In Hong Kong, public participation practices are common, but overall political empowerment is limited (see Chapter 4). There are two statutory public inspection windows in EIA. Procedural arrangements are equivalent or, in some way even more comprehensive than in other democracies (e.g. see Ho *et al.*, 2013). However, as the case studies suggest, although they were provided with opportunities to be involved in decision making, their influence on authority decisions, in the end, is limited. The public's desire for democratic decision-making in the EIA was not answered in practice.

The incorporation of public participation in the EIA may not be associated with intrinsic democratic values but be merely perceived as a procedure. It, therefore, may not be able to transform the political reality behind the EIA decision-making process. Instead, it may be more appropriate to interpret public participation in EIA as a reflection of political empowerment. Hong Kong's EIA public participation inherited the illiberal characteristics of its political system. With a further look at international experiences, there are similar observations from other countries. For example, empirical studies in China show that public participation outcomes are shaped by the political will of the government (Tang, Wong and Lau, 2008; Brombal, Moriggi and Marcomini, 2017).

Empirical findings suggest that the opportunity to be involved and the opportunity to influence decisions are not directly connected. They pose challenges to the international discourse on finding a universal standard for public participation in IA. Public participation is merely a procedure. Although it carries an intent to promote democratic environmental decision making, it does not bring the necessary change to the power balance of that specific political context. It shows a rather sceptical or permissive view on the urge to set up or enhance the public participation mechanisms for the IA among other illiberal (or less liberal) political

systems such as Pakistan (see Nadeem and Fischer, 2011) or Iran (see Khosravi, Jha-Thakur and Fischer, 2019).

#### 10.2.5. Public Participation in Rationality Models

Scientific rationality models (Bartlett and Kurian, 1999; Cashmore, 2004, also see Chapter 2) of IA emphasise the applied science aspect of IA and the comprehensive consideration of environmental information. In these types of models, public participation mostly serves as a means to assist the technical assessments and environmental design. The EIA and public participation practice in Hong Kong has a strong resemblance with the scientific rationality models. Public participation in Hong Kong's EIA showed that the technical outcomes are strong, especially in the provision of information and technical quality assurance. However, it also suggests that the theoretical framing of public participation in the scientific rationality models are subjected to two major challenges.

First, the line between scientific facts and values has become blurred. This is a known subject in IA literature. Science can not provide absolute proof in its predictions (e.g. Wynne and Mayer, 1993). The management and communication of such uncertainties in IA are subject to values that rely on the judgement of the decision-maker (Lees *et al.*, 2016). The case studies found that scientific uncertainty is not the only factor that made this line blurred. In Hong Kong, participation from external experts is common. They do not only provide information and review of the quality of the information; their comments often include criticism or challenges on the assumptions, parameters, methods and criteria adopted in technical assessments. There is a difficulty in the pursuit of technical rationality in IA practices: It is practically impossible to apply the latest science to the technical assessment; and, it is practically impossible to cover all possible parameters of concerns in the technical assessment. For example, among the case studies, there are repeated requests on the use of latest WHO air quality guidelines for the air quality impact assessment and include assessment on health impact. The corresponding policies could not catch up and could not convince the public why such is not adopted in the EIA. Beyond the knowledge gaps of science, the information contained in IA just won't be able to cover the full and best

knowledge on environmental impacts. In addition to the uncertainty of science, the practical limitations furthered the cause that the technical assessments involve individual's judgement and interpretation of the scientific "facts", which would also be shaped by the environmental policies it adopted. As a result, it is unable to distinguish scientific facts and values in practice, and the technical assessments are expected to have increased difficulty in finding ground in scientific rationality.

Second, although there are pluralistic interpretations of the IA models and approaches, the growth of demand in public involvement is seemingly pushing IA away from the scientific rationality models. Further to the above observation that it is more difficult to find the ground for scientific rationality in today's IA practice, members of the public demand to be involved in the IA practices, and this demand is not limited to the technical contributions. In Hong Kong, social demand for higher transparency and empowerment sparked conflicts in EIA practices. It further the discourse that the scientific rationality models are incapable for a social explanation, prediction and address the social impacts in IA (Lockie, 2001).

Meanwhile, in Hong Kong, public trust in experts and authority is low. As a result, the technically-focused EIA approach in Hong Kong is moving away from social norms in environmental decision-making. It is thus unable to build legitimacy for environmental decisions in the process. This observation is aligned with the international transformation discourse from centralised decision-making to governance (Arts *et al.*, 2012; Dryzek, 2013). In other words, the technical rationality model is losing its capacity to carrying the substantive objectives in the normative and legitimacy criteria embedded in the IA design in Hong Kong.

#### 10.2.6. Public Participation in Civic Science and Governance models

The civic science and governance models (Cashmore, 2004, also see Chapter 2) emphasise the social-political functions emphasise the needs for deliberation in decision-making, as to reflect the plurality of societal priorities and values. The challenges to the scientific rational models discussed above suggested that a transformation to civic science and governance models is necessary for fully carry out the substantive objectives of IA. However, the case studies in Hong Kong also revealed that there are two challenges. First, as discussed in Section 10.1.1, the

capacity for IA in pursuing deliberative and democratic decision-making depends on the political reality of that specific context. Second, the cases studies in Hong Kong also showed the alignment of the models applied in IA is restricted by the establishment and set-up of the IA system.

As explained in Chapter 9, the technically-focused approach of Hong Kong's EIA practice is rooted in the EIA Ordinance setup. The Technical Memorandum, authority and establishment of ACE are all focused on technical aspects; meanwhile, it does not contain a provision on addressing social and political concerns over the environmental impacts in the process. As such, the means and capacity to address public concerns on the environment in Hong Kong's EIA is heavily restricted. Changing the approach for public participation would, therefore, require corresponding changes to the legislation and the establishment to accommodate civic science model approaches.

The alignment of the established IA system between scientific rationality and civic science approaches are rarely discussed in the IA literature. Although there is no systematic international comparison on the approaches used in IA legislation and administrative establishments, it is expected that transforming the approach in other EIA systems to accommodate governance principles would face similar difficulties. Literally, all EIA systems are rooted in the US NEPA, which was established to promote scientific rationality in policies and decision-making (Caldwell, 1991; Bartlett, 2005; Cashmore, 2004). Many environmental authorities and agencies are set up to provide scientific-based advice in the EIA process, such as the Netherlands Commission for Environmental Assessment (NCEA)<sup>131</sup>. As such, similar constraints can be expected to be found on other EIA systems.

There are problems of trying to adopt civic science and governance models objectives with a scientific rationality model setting. Public participation as of the current setting cannot achieve the deliberation required in the civic science and governance models (Wiklund, 2005) or satisfy the demands for transparency and accountability (Morrison-Saunders and Early, 2008). Even in democratic countries,

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<sup>131</sup> As described on their website, NCEA provide advisory services and capacity development for environmental assessment.

there are observed difficulties for public participation to achieve some of the democratic objectives. Authorities were set up to have discretionary power on the environment and relevant related issues. The discretion and balance of power were observed to be obstacles in the transformation to environmental governance in IA (Christensen, Kørnøv and Nielsen, 2012), as they have also shown to have reinforced the top-down approach in many infrastructure projects with strong interests behind them (e.g. Rozema and Bond, 2015; Elling and Nielsen, 2018). The balance of power also includes the power of the project proponent and developers. Project proponents tend to have the power to lead the public participation process and their attitude towards public involvement is noted as a crucial factor in the effectiveness of public participation (Pölönen, Hokkanen and Jalava, 2011).

In short, public participation would not be able to serve those assumed functions in the civic science models unless substantive changes were made to legislation and administration that favour further deliberation and reorganise the power balance in project development and decision-making.

### **10.3. Discussion**

This PhD research project took an inductive approach to re-identify the contribution of public participation in IA, based on the substantive objectives but without any preset parameters. As shown above, many of the observed functions in Hong Kong are in line with international observations and discourse. However, it also shows a variation of the functionality which provides new insights on the actual works in public participation practices. In addition to the discussion above, there are two further points for discussion.

First, the public participation outcomes in Hong Kong seem to be heavily influenced by the context, i.e. the political system and civil society. The influence of context in IA practice is a well-known subject (see Kolhoff, Runhaar and Driessen, 2009). However, it is currently covered only thinly in the IA literature. There isn't a good understanding on the linkages between context and outcomes. For example, the balance of power and top-down approaches in project development is commonly known as a constraint for the deliberation in public participation. In Hong Kong, this is due to the illiberal political system that centralises the power of making



policy priorities in high government officials. These tend to favour sectoral interests; however, similar problems are also found in liberal democratic systems like Australia and Denmark (Pope *et al.*, 2018; Elling and Nielsen, 2018). Another example is that studies in Hong Kong and Denmark suggest that public participation in both regions have strength in ensuring quality control but have different reasons. In Denmark, it was because the combination of the traditional role in Danish citizens in the planning process, and that the authorities and proponents are fearful of the formal complaints that would cause delay to the project (Lyhne *et al.*, 2017); In Hong Kong, it seems more about a combination of the technical challenge being the most feasible mean to challenge a project and that the authority is afraid of being challenged in Judicial Review and about the consequences of losing.

It showed that different contexts could result in similar outcomes to a certain perspective. While each of the contextual components would be view as an individual factor (Kolhoff, Runhaar and Driessen, 2009), It is necessary to also consider the combined effect of contextural components. In the prior example, it's the top-down approach in project development created by the contexts, the latter example is the fear generated. It is the question of how different components of the context conditions build certain elements in IA practice? These aspects are not yet discussed in the IA models, and the case studies could not provide a clear answer either.

Second, EIA practice in Hong Kong showed a sign of decentralisation of the EIA process. The information circulation discussed in Section 10.1 is the most proponent observation; however, the increased interaction (i.e. liaison activities) between project proponents and the wider stakeholders seem to start altering the relationship among authorities, project proponent and the public in the IA models. There is seemingly a shift of power in the EIA practices. The members of the public were given a certain degree of opportunities to audit the EIA practice and negotiate environmental measures directly, without actions from the authority. So, there is little information about the outcome of these activities. Nevertheless, if the trend of de-centralizing of IA practice was confirmed, it would challenge the foundation

models of IA practices (e.g. the models by Bartlett and Kurian, 1999) and give new directions for IA development.

## 11. CONCLUSION

This PhD research project adopted an inductive approach to evaluate the contribution of public participation in IA practices by examining public participation in Hong Kong's EIA practice. This chapter provides a brief overview of the key findings from the case studies and their contributions to the international discourse with regard to effective public participation. Limitations of the research and suggestions for future researches are provided in the end.

### 11.1. Overview of Research

The research was designed to review and advance IA theories and conceptual models. The focus was on substantive effectiveness of IA and includes a review of the latest discourses in the literature. The assumption was that IA should promote long term sustainable development through ensuring environmental impacts are effectively considered in the process; reflecting social norms and expectations; building legitimacy on the environment decisions; and, facilitate transformative changes. The aim was to analyze the roles of public participation. This was based on three major steps:

- *To review public participation practices and their outcomes at each of the EIA stages;*
- *To combine case study findings and provide a comprehensive analysis on the public participation's impacts on "Procedural Functionality", "Normative and Legitimacy Functions" and "Transformative Functions" criteria; and*
- *To critically review the findings in the light of the international literature and professional discourse.*

### 11.2. Public Participation in the Preparation of EIA Report

The EIA of *Tung Chung New Town Extension* project was selected to examine the impact of public participation on the preparation of the EIA report. The *Tung Chung New Town Extension* is a strategic planning project that proposed to extend the existing New Town through reclaiming 160 ha of land and develop 125 ha of existing land. The project attracted some intense attention from green groups, which expressed concerns over the potential impacts on the ecologically sensitive

sites within the project area, especially at the Tung Chung Estuary/Bay and along the natural streams. The green groups submitted detailed comments during the public inspection of the project profile, including their in-house survey results on the ecological values and species with conservation interest. The EIA study briefs issued by the Director of Environmental Protection required the project proponent to follow up these comments. The *Tung Chung New Town Extension* project conducted three stages of “Public Engagement Exercise” in parallel to the EIA report, allowing for an in-depth analysis on how these concerns were treated during the project development and the EIA process.

In the case study, it is revealed that the comments and information provided by the members of the public affected the assessment work in EIA, and the information helped in determining the scope of the assessment. Then, through the influence of technical assessments, it guided and influenced the project development and design in the process. In the light of the ecological concerns, the *Tung Chung New Town Extension* project dropped the proposed reclamation near the estuary/bay area. It reduced the scale of development near the ecologically sensitive area to create a river park and buffer zone before submitting the EIA report for approval. Later in the EIA report, mitigation measures for identified species with conservation interest were proposed. The outcome of this case could be said to be a compromised result.

With regards to other EIA cases in Hong Kong, there are several observations with regards to the implication of public participation at this stage. More common comments made by members of the public during the public inspection of the project profile include voicing an objection to the project (or part of the project); the imposition of restrictions to the project; the request for additional assessments; and, a technical review of the information. The empirical evidence showed that submissions from the members of the public have a direct impact on the preparation of EIA reports. Whenever an environmental enquiry was raised on the project profile, the authority could ask the project proponent to follow up on the EIA, especially if the subject is regulated in the EIA Ordinance. However, the authority's responses were limited to technical assessments. It would require

additional mechanisms for public participation to have a chance to lead to changes in the project design, in particular, to connect the environmental concerns to the project development and planning process. Although the project development is related to the preparation of EIA, the EIA process does not provide any window for the concerned members of the public to liaise with the project proponent on the project design. It requires other public participation windows and the will of the project proponent to liaise with the concerned public for the search of solutions.

### **11.3. Public Participation in the Review of EIA reports and Approval Decision-making**

Based on the official numbers provided by the Environmental Protection Department (EPD), it is uncommon to see an EIA report to receive a high number of comments in Hong Kong, with only around 10% of all the reports receiving more than one hundred sets of comments. While several major environmental NGOs would review EIA reports on a routine basis, the general public seems to act on a case by case basis. EIAs that receive a high number of comments are likely to result from collective actions taken against a project.

The EIA of the *Development of the Integrated Waste Management Facilities Phase 1* project was selected to have an in-depth analysis of the comments and respond to comments regarding the EIA report. There was a total of 319 comments received by the EPD during its first EIA report submission, which is a, comparatively speaking, high number. There are several observations from the comments received by EPD. There were a lot of duplicated submissions which means the 319 sets of comments could be summarised into 63 individual sets of comments. The comments included a wide variety of issues, but many of them concerned similar subjects, i.e. site selection and ecological impacts. Moreover, among the 63 individual comments, only 21 of them are explained in detailed. Responses to comments by the project proponent could be divided into four types: i) Justify the need for the project, ii) emphasise that alternatives had been considered. iii) Reiterate that environmental impacts would comply with standards. iv) Other technical explanations.

The Advisory Council on the Environment (ACE) played an important role in the review of the EIA report. The members of ACE would follow up comments from the members of the public in their discussion and would question the project

proponents if necessary. Regarding the outcomes, it was revealed that the public participation outcomes during the review of the EIA report were focused heavily on contesting the environmental compliance. Public comments could affect the approval decision if it convinces the authority or ACE that the EIA report might not comply with statutory requirements. However, while it is common for ACE to make recommendations on additional or enhancing measures, there is limited capacity to press for major changes to the project design at this stage. The focus tends to be more on implementing additional environmental mitigation and monitoring measures.

#### **11.4. Public Participation in Post-approval Environmental Management**

After a project receives the approval of the EIA report and the associated environmental permits, the statutory EIA process is mostly complete. After the project commences, the project proponents are required to follow the instructions and criteria stipulated in the environmental permit(s). In Hong Kong's EIA system, there is no statutory requirement to conduct public participation after the public inspection of the EIA report. In recent years, the EPD adds conditions to the environmental permits that require the project proponent to communicate and liaise with the stakeholders and affected communities, acting as an additional public participation window. The requirement could take various formats, from establishing a hotline for public enquiries to forming stakeholder/community liaison groups with regular meetings. In contrast to the two public participation windows described above, these communication and liaison groups' practice focus on the interaction between the members of the public and the project proponent, with the authorities playing a much less significant role in it.

The Telegraphy Bay Community Liaison Group of the *South Island Line (East)* project was used as the main case study. *South Island Line (East)* project is a railway project that extends the railway network to the southern part of Hong Kong Island. The project proposed to use the existing Telegraph Bay Barging Point for the transportation of construction spoil. The proposal received immediate objections from the local communities as the lorries and barging activities might be a nuisance to the local community. The liaison took more than four years. It started before the

project commenced and lasted until all barging activities and landscape reinstatement works were finished. The case study showed that, while the local community could not stop the use of the barging point, most of their environmental enquiries were responded to. As a result, additional environmental impact mitigation measures and monitoring were implemented by the project proponent.

The case study shows that with active participation, liaison between members of the public and the project proponent could be an effective measure as an EIA-follow up, allowing for more dynamic approaches in the post-approval environmental management of the project. While the potential of the use of stakeholder/ community liaison was recognised, other EIA cases revealed that active participation like the one observed in the Telegraph Bay Barging Point case is not common. Different local stakeholder groups would have a different focus of concern, which some may be concerned more by the social impacts of the project rather than environmental impacts.

#### **11.5. Observed Functionality of Public Participation in EIA Effectiveness in Hong Kong**

Combining the case study findings and putting them back to the three functionality criteria, it is found that Hong Kong's public participation have strength in procedural functionality. It enhanced the circulation of project and environmental information, also ensuring that the EIA procedures and environmental impacts would fulfil statutory requirements. For some cases, public participation allowed for external experts to provide technical advice, which also provides a guidance effect to the technical assessment and project management.

While procedural functionality appeared to be strong, public participation in Hong Kong has difficulties in reflecting on environmental and social norms in the EIA decision making. The public participation practices provided the platform that let groups with different interests present their views in the process; however, many environmental and perceptual conflicts were not addressed in the process. Public participation was not able to settle the disputes between the environmental acceptability and the statutory criteria. While it disclosed the environmental and project information, it could not answer the demand for decision-making

transparency. The case studies found that the overall impact on the legitimacy of EIA and the decisions were mixed. Public participation offered opportunities for conflicts and disputes to be addressed during the project development through other means. Still, the EIA process itself has minimal capacity in building legitimacy for the decisions.

The case studies suggested that public participation has the potential to facilitate transformative learning. While subject to individual and institutional barriers, authority, project proponent and major environmental NGOs that participate to the EIA process routinely appear to be able to learn from the process and adjust their approaches in the EIA participation. Meanwhile, it was noted that the number and level of participation among the wider public in the EIA process were low; thus, it does not favour social learning for the general public.

It is noted that there are factors that are either enabling or restricting the above functionalities. In Hong Kong, the legislation and administrative establishment determined the technically focused approach in EIA practice. The active and competent civic society allowed high-quality technical input, despite having a limited capacity in the number of projects they can participate in. The lack of synergy among the project development, EIA and other parallel processes restricted the capacity of influencing policies and projects. Moreover, the wider social-political conflicts represented a strong obstacle in addressing the normative disputes.

#### **11.6. The implications for Public Participation and IA Models**

Comparing the empirical findings in Hong Kong with those discussed in the international professional literature, there are several observations. The procedural functionality found in Hong Kong's case studies, in general, aligns with the international experience. However, there were several diversions. Public participation facilitated a decentralisation of the information flow as compared to the conventional centralised information provisions. The quality assurance and problem-solving functions in Hong Kong tend to be more technical and compliance-focused. The capacity for addressing perceptual conflicts seem rather limited when compared with other international cases.



The difficulties in achieving the normative and legitimacy functions observed in Hong Kong were also observed in other world regions. It was noted that the legislation and political reality in Hong Kong had restricted the potential for members of the public to influence high government decision making. However, the constraints of discrete and balanced power in project development were commonly found elsewhere, suggesting that public participation setups are inadequate to resolve these constraints regardless of the political system behind them. The willingness of the decision-makers and suitable engagement approaches in public participation remain critical factors in resolving disputes and building the legitimacy of the process.

Similarly, the constraints observed on the transformative functions of public participation echoes with the international findings. While it appeared that public participation could facilitate institutional learning among certain groups, it had significant constraints with regards to facilitating wider social learning processes. Besides the approaches used in public participation, the cases in Hong Kong supported the observations that low numbers of individuals participating in the process would limit potential learning outcomes.

The existing IA models and public participation discourse have yet to reflect many of the issues identified in actual practice. One of the rationales for introducing public participation in IA practices is the desire to promote the rights of citizens to be involved and a right to influence. The cases in Hong Kong indicated that while setting up public participation in IA would offer opportunities for citizens to be involved, it does not necessarily mean empowering them to influence the decision. In an illiberal political system, such influence would be determined by the political will of high government, and the impact of public participation itself would be minimal.

The functions of public participation in IA are framed differently in the Scientific Rationality Models and the Civic Science and Governance Models. However, there are problems faced by both models. The original design of IA was based on the Scientific Rationality Models that viewed public participation as a means to assist the technical competence of IA. This approach appears to have difficulty in gaining

the perceived legitimacy from the public today. The uncertainty of science has made it difficult to prove rationality through technical assessments, especially when the public loses trust towards authority and experts. It also has limited capacity to understand the social-political aspects of the environmental impacts and to adequately answer the growing public demands on transparency and involvement. At the same time, the deliberation of decision making emphasised in Civic Science and Governance models are difficult to achieve at this moment. Many EIA legislation and administration establishments seem to have inherited the intents to promote Scientific Rationality. Public participation, as currently practice cannot achieve the demanded deliberation alone. It would require substantive changes to the legislation and administrative set up to facilitate the transformation and implementation of Civic Science and Governance models.

#### **11.7. Limitations**

Whilst a number of important findings were presented in the previous chapters, many questions remain. Limitations are caused by available resources and research approaches adopted. These would require follow-up studies.

As this is a self-funded PhD, the limited resources restricted the scale of the study. The case studies mostly relied on documents as the source of empirical evidence. This was flanked by examining publications from different authors and cross-checking timeline and events. It is acknowledged that the environment has cognitive values and that environmental outcomes involve subjective perceptions. For example, there are subjective judgements behind the environmental concerns raised in a submission. These could potentially be uncovered by a survey or through interviews with participants. However, and importantly, participants were anonymised in documentation and practitioners mainly were not allowed to disclose unpublished project information to a third party.

The case studies focused on individual “critical” cases. These cases were selected as they involved active engagement among different actors. However, the selected cases do not necessarily represent all public participation and EIA practices in Hong Kong. As described in Chapters 5 to 7, it is not common to see such high levels of public engagement in Hong Kong’s EIA practices. While the level of engagement

and public participation outcomes vary case by case with the same wider contextual setting, this study could not explain the reasons behind such variation itself. This would require further examination of other cases. Moreover, the selected cases focus on recent EIA practices in Hong Kong. With only one case selected for each EIA stage, it provided little information about the changes in EIA practices over time. As such, although it is found that public participation should encourage learning and feedback for transformative changes of the EIA system, little empirical evidence for this could be generated.

Regarding the generalization and synthesis of research findings, the case studies focus on identifying constraints and missing pieces of the existing theoretical discourses on public participation and IA effectiveness. Evidence for the causal relationships between identified factors and outcomes was limited. The three cases studied came from different settings and could not be compared directly to test the implication of individual factors that led to specific public participation outcomes. Furthermore, it is difficult to directly compare research findings with the international literature. On the one hand, it is understood that the outcomes of EIA practice depend on contextual factors. In-depth studies about the implication of illiberal democracy political systems on public participation or EIA effectiveness are limited. On the other hand, this research identified some new and rarely discussed subjects that affected public participation outcomes and EIA effectiveness. This included decentralisation and shift of power in EIA implementation. It would require further studies to generate more information to form the basis for systematic comparisons or quantitative studies for further generalization of the findings. The following section continues this discussion.

### **11.8. Outlook**

Being inductive, this research reflected on rarely discussed issues that are yet to be accommodated in theories of public participation and IA effectiveness. It would require further studies to further investigate this. Subsequently, suggestions for further studies are made.

One of the reasons that the case studies were conducted in Hong Kong was that EIA practices in Hong Kong have rarely been discussed in the recent year. Hong Kong has a unique political-social context. The EIA outcomes reveal issues that are different from other countries/regions. Whilst many issues of EIA practice in Hong Kong were uncovered and discussed, only a limited number of explanations could be provided. It was found that when actors were fully engaged in the process, they influenced environmental outcomes; however, the level of engagement varied greatly between the cases, and it is impossible to speculate about the factors determining such different levels of engagement. It is noted that EIA practices seem to be able to learn from previous experience and change the approaches. In addition to the empirical evidence provided in this PhD research, further follow-up studies about the motives and format of changes are needed. Finally, it is revealed that the political context did constrain EIA effectiveness outcomes, particularly with regards to the legitimacy and the capacity for transformative changes. Further work is required for establishing solutions to address these problems.

Regarding the advancement of IA theory, the research findings revealed that the existing theories of public participation and IA practices are unable to accommodate emerging agendas in IA practice. It is recognized that there are two areas that need further study. First, there is a need to update the models on how IA works. Conventionally, IA models tend to focus on the implementation through an established authority. However, in Hong Kong, it is observed that the IA process is being decentralized. Project proponents and civil society take voluntary actions, and environmental concerns were addressed through parallel processes during project development. Decentralization and shift of powers during the process probably align with the governance discourse in IA implementation, but the conventional model could not accommodate these during the EIA process. Therefore, it is suggested that further study is needed to develop and update IA models with regards to these changes. At the same time, it is observed that the changes in public expectation are pushing IA practices away from the conventional technocratic approaches to civic science approaches. This created frictions to the existing establishments of the IA system that are usually rigid and have limited

capacity to change the approach in IA practices. It is also necessary to look for solutions to facilitate changes to respond to public expectations.

Another suggestion for further study is a further exploration of the contextual factors. While contextual factors are a known subject that affects IA implementation and outcomes, there are little in-depth studies that reveal the implication of the individual factors. This research reveals that the political system and characteristics of civil society have noticeable impacts on public participation and IA outcomes. It is suggested that more in-depth studies with both similar and different political systems and civil society characteristics are needed.

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## **APPENDICES**

## Appendix 5.1 Species of Concerns identified in the Joint Green Group Submission

English Name	Location	Conservation Status*
Romer's Tree Frog	Tung Chung River and Riparian Zone, Tung Chung Valley	[1], [3]
Hong Kong Newt	Tung Chung River and Riparian Zone	[1]
Short-legged Toad	Tung Chung River and Riparian Zone	[2], [3]
Beijiang Thick-lipped Barb	Tung Chung River and Riparian Zone	[2], [3]
Giant Mottled Eel	Tung Chung River and Riparian Zone	[2], [3]
Jhora Scrub	Tung Chung River and Riparian Zone	[2]
Hong Kong Spiranthes	Tung Chung River and Riparian Zone	[1]
Pticher Plant	Tung Chung River and Riparian Zone	[1]
Burmese Python	Tung Ching Estuary and Bay	[1], [3]
Chinese Horseshoe Crab	Tung Ching Estuary and Bay	[3]
Mangrove Horseshoe Crab	Tung Ching Estuary and Bay	[3]
Swinhoe's Egret	Tung Ching Estuary and Bay	[3]
Pacific Reef Egret	Tung Ching Estuary and Bay	[3]
Tokay Gecko	Tung Chung Valley	[3]
Chinese Bull Frog	Tung Chung Valley	[3]
Emerald Dove	Tung Chung Valley	[3]
Eurasian Eagle Owl	Tung Chung Valley	[3]
Golden Birdwing	Tung Chung Valley	[1],[2],[3]
Common Birdwing	Tung Chung Valley	[1],[2],[3]
Oriental Striped Blue	Tung Chung Valley	[2]
Incense Tree	Tung Chung Valley	[1],[3]
Toothed Black Tree-fern	Tung Chung Valley	[1],[3]
Sullied Sailer	(Not Specified)	[2]
Tiny Grass Blue	(Not Specified)	[2]

(Simplified from Green Power, 2012)

### Remarks:

The table only includes the more concerned species that were pointed out in the submission, the more common species and those not listed as a protected species in any form are not included in the table.

The submitted survey findings used several references of the conservation status, besides the legislation and policy in Hong Kong, they also used the legislation of mainland China, and conservation status in IUCN/China Data Book/ China Species Red List. Since legislation of mainland China does not apply to Hong Kong, the conservation status in this table is simplified to 3 categories: [1] Protected under Hong Kong's legislation (ie. Cap

160 Wild Animal Protection Ordinance), [2] Species of Conservation Concern in Agriculture, Fisheries and Conservation Department (AFCD)'s Hong Kong Biodiversity Database; and, [3] Others, if it is protected under mainland China's legislation or listed as a threatened species in IUCN's or China's database.

**Reference:**

Green Power (2012) *Green Power's Response to Project Profile - Tung Chung New Town Development Extension*. [Online]. 2012. Available from: <http://www.greenpower.org.hk/html5/eng/concern.shtml> [Accessed: 2 February 2017].

## Appendix 5.2 Summary of Queries In the Joint Green Group Submission

### Summary of Environmental Queries in the Joint Green Group Submission

Environmental Aspect	Details of the queries
General	Justification of the need of the development and associated works and how potential environmental impact could be avoided  Alternative development options, including “no reclamation in Tung Chung Bay” and “no development in Tung Chung River Valley” options
Ecological Impact	No net loss of Biodiversity and any threat to the survival of concerned species, including those listed in Table 5.1.
Fisheries Resources	Fishery impacts caused by the reclamation of Tung Chung Bay and Tung Chung River to be fully investigated and assessed.
Air Quality	Use of New Air Quality Guidelines by World Health Organization <sup>1</sup>
Water Quality	Assess of potential impacts on the water quality due construction activities and other projects in the vicinity.
Landscape	To retain sufficient vegetation to prevent urban heat island effect.  Preserve natural river courses as breeze channel.  Address the slope stability and Risks to Public Safety at downslope of Tung Chung River Valley

(Simplified from Green Power, 2012; Green Power *et al.*, 2012)

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<sup>1</sup> It does not specified the version of the Air Quality Guidelines, referring to the time of the submission, it is most likely referring to the Guidelines updates in 2005.

### Summary of Project Queries in the Joint Green Group Submission

Aspects	Queries
General	Terminate the present planning and engineering study on the remaining development
Planning	<p>Adopt the green groups' recommended DPA plan (ie. Zone most the undeveloped land adjacent to the Tung Chung River and Bay as Green Belt, Coastal Protection Area and Conservation area)</p> <p>Land use planning take its permeability, natural landscape and ecology into account</p> <p>Protect and conserve high-quality natural habitats</p> <p>Fung Shui Woodlands and vegetation should be retained</p> <p>Promote compatible community use and enjoyment in the Tung Chung River Valley and the estuary</p>
Environmental Protection Measures	<p>Establish a system of protected areas to conserve biological diversity.</p> <p>Develop guidelines for selection, establishment and management of protected areas</p> <p>Rehabilitate and restore degraded ecosystems</p>
Civil Engineering	<p>Prohibit civil engineering work, channelisation and reclamation in Tung Chung River courses, banks, estuary and Bay.</p> <p>Prohibit discharge of effluents and connection of outfalls to Tung Chung River channels and estuary.</p> <p>Rehabilitation of artificial river sections.</p>

(Simplified from Green Power, 2012; Green Power *et al.*, 2012)

**Reference:**

Green Power (2012) *Green Power's Response to Project Profile - Tung Chung New Town Development Extension*. [Online]. 2012. Available from: <http://www.greenpower.org.hk/html5/eng/concern.shtml> [Accessed: 2 February 2017].

Green Power, Designing Hong Kong, Eco-Education & Resources Centre, Green Lantau Association, Hong Kong Bird Watching Society, et al. (2012) *Joint Green Groups' Statement on Protection and Conservation of Tung Chung River, Estuary, Coastal Areas and Associated Habitats*. [Online]. 2012. Available from: [http://www.greenpower.org.hk/html5/download/concern/20120619\\_e.pdf](http://www.greenpower.org.hk/html5/download/concern/20120619_e.pdf) [Accessed: 22 December 2017].

### Appendix 5.3 Predicted impact and Proposed Mitigation Measures of Concerned Species

English Name	Predicted Impact and proposed mitigation measures
Romer's Tree Frog	The habitats would be zoned as Coastal Protection Area, thus not affected by the development.
Hong Kong Newt	Habitats would be protected by the buffer zones
Short-legged Toad	Habitats would be protected by the buffer zones
Beijiang Thick-lipped Barb	Potential minor to moderate indirect impact by surface runoff during the construction phase. Good site practice would be implemented.
Giant Mottled Eel	Potential minor to moderate indirect impact by surface runoff during the construction phase. Good site practice would be implemented.
Jhora Scrub	Potential minor to moderate indirect impact by surface runoff during the construction phase. Good site practice would be implemented.  Positive effect during the operation phase as would be benefited from the buffer zones.
Hong Kong Spiranthes	Not recorded during the ecological survey conducted by the consultant. Impact is expected to be insignificant
Pticher Plant	Not recorded during the ecological survey conducted by the consultant. Impact is expected to be insignificant
Burmese Python	Not specified, potential impact from habitat fragmentation and disturbance of human activities.
Chinese Horseshoe Crab	Minor impact during the construction phase as the non-dredged method will be adopted. Good Site impact will be implemented.

	Impact expected to be insignificant in operation phase.
Mangrove Horseshoe Crab	Minor impact during the construction phase as the non-dredged method will be adopted. Good Site impact will be implemented. Impact expected to be insignificant in operation phase.
Swinhoe's Egret	No loss of intertidal habitats, impact expected to be insignificant.
Pacific Reef Egret	Recorded in the survey on seawall within the footprint of Road P1, utilization of seawall by this species was considered very low, no specified mitigation was proposed.
Tokay Gecko	Not specified, potential impact from habitat fragmentation and disturbance of human activities.
Chinese Bull Frog	Short-term minor to moderate impact during the construction phase. Capture-and-translocation exercise will be implemented. Potential positive from the buffer zones and revitalize of channelized stream sections.
Emerald Dove	Potential moderated effect due to construction work of developments and proposed service reservoirs. Compensation woodland planting will be implemented. Minor impact during the operation phase.
Eurasian Eagle Owl	Recorded outside the Project Area, no specified mitigation measures proposed.
Golden Birdwing	Moderate impact expected during the construction phase. Compensation woodland planting will be implemented. Minor impact expected during the operation phase.
Common Birdwing	Moderate impact expected during the construction phase. Compensation woodland planting will be implemented. Minor impact expected during the operation phase.



Oriental Striped Blue	Not recorded in the survey conducted by the consultant. Potential minor impact due to habitat loss and construction activities.
Incense Tree	Not specified. Fung Shui Woods within the RODP boundary will be covered by either Conservation Area or Green Belt, except those in Villiage land use zones.
Toothed Black Tree-fern	Not specified. Fung Shui Woods within the RODP boundary will be covered by either Conservation Area or Green Belt, except those in Villiage land use zones.
Sullied Sailer	Moderate impact expected during the construction phase. Compensation woodland planting will be implemented.  Minor impact expected during the operation phase.
Tiny Grass Blue	Not recorded in the survey conducted by the consultant. Potential minor impact due to habitat loss and construction activities.

The above table simplified from the Ecological Chapter of the EIA report, full report is available at:  
[https://www.epd.gov.hk/eia/english/alpha/aspd\\_652.html](https://www.epd.gov.hk/eia/english/alpha/aspd_652.html)

**Appendix 6.1 Summary of Comments and Response of Comment of Development of the Integrated Waste Management Facilities Phase 1 EIA**

No	Duplicate	Summary of Comment	Explanation	Aspect	Summary of Response
PC001		Question the stance of EPD	N/A	N/A	The EIA have been finished in accordance to the EIAO and TM. The EIA found that the environmental impact at both of the sites are acceptable.
PC002		Request of further information about the project. Request of media interview	N/A	N/A	
PC003		Suggest that the TTAL site is better than the SKC site in environmental term, due to the ecological, fisheries impact and health.	detailed	Site Section Waste Managment Policy Marine Ecology Fisheries Health Impact	The EIA found both of the sites were environmentally acceptable under three different senarios. Mitigation measures have been proposed at the SKC sites to minimize and mitigate the potential ecological and fisheries impact.
PC004		Object to the project as it adversely affect visual landscape	mentioned	Site Selection Landscape & Visual	The EIA have been finished in accordance to the EIAO and TM. The EIA found that the environmental impact at both of the sites are acceptable.
PC005		Object to the use of SKC site as it pose risks to the surrounding environment and health of the people	mentioned	Site Selection Health Impact	The EIA have been finished in accordance to the EIAO and TM. The EIA found that the environmental impact at both of the sites are acceptable.
PC006		Question about the study area and methodology of Air Quality Impact Assesment, which do not cover Cheung Chau. Disagree with the conclusion of the air quality impact assessment	detailed	Air Quality	Cheung Chau have been covered in the air quality assessment, which the cumulative impacts from other air emission source at Cheung Chau had been taken into account
PC007		Object to the use of SKC site as it have potential impact to the air quality and rain water quality at 'Sea Ranch', also the emergency helicopter service.	moderate	Site Selection Air Quality Drinking Water Quality	The operation would adopte the most stringent international standard. Site slection process have been throughfully studied.
PC008		Object the use of SKC site as there are ecological sensitive area surrounding the area, suggest use Lamma quarry as an alternative site	detailed	Marine Ecology Landscape & Visual	The site of Lamma Quarry had been studied, which is not a viable option. Ecological and Environmental protection measures have been proposed to minimize the impact.
PC009		Object the use of SKC site as it would affect the living environment in the islands district. Suggest use other waste treatment method or other sites.	mentioned	Site Selection Alternatives	Reiterate that alternatives have been considered, the EIA have been finished in accordance to the EIAO and TM. The EIA found that the environmental impact at both of the sites are acceptable.
PC010		Disagree with the justification of omitting Soko Islands as a potential site. Question about the alternatives considered. Object to the project.	detailed	Alternatives Marine Ecology	Reiterate that site seletion alternatives have gone through a systematic and deliberate provess.
PC011-PC155	219	Object the use of SKC site as it has potential impact to the health of the Cheng Chau residents, the habitat of dolphins and fisheries activities.	mentioned	Site Selection Air Quality Marine Ecology Fishery	Reiterate that the operation will meet the most stringent international standard. The EIA have covered the air quality, ecological and fisheries impact. The EIA found that the residual impact after implementation of mitigation measures are acceptable
PC156		Simillar to PC011-PC0155,Objection to the SKC site as it has potential impact to the health of the Cheng Chau residents, the habitat of dolphins and fisheries activities.	mentioned	Site Selection Air Quality	Reiterate that the operation will meet the most stringent international standard. The EIA have covered the air quality, ecological and fisheries impact. The EIA found that the residual impact after implementation of mitigation measures are acceptable
PC157		Criticize the lack of fcomprehensive waste management strategy, disagree with the selection of SKC site over TT site. Critisize various of the techncial description and wordings in the Executuve summary	detailed	Site Selection Waste management policy Technical Descriptions	Explanation on the waste management policy, The EIA found both of the sites were environmentally acceptable under three different scenarios. The EIA found that the concerned environmental issues would be acceptable after implementation of mitigation measures.

**Appendix 6.1 Summary of Comments and Response of Comment of Development of the Integrated Waste Management Facilities Phase 1 EIA**

No	Duplicate	Summary of Comment	Explanation	Aspect	Summary of Response
PC158	6	Criticize the engineering setting of the plant. Question the decision on the waste treatment technology to be used. Disagree with the project.	detailed	Engineering setting and technology Air Quality Ecology Fishery Alternatives	The EIA found both of the sites were environmentally acceptable under three different scenarios which include the proposed technology to be used. The EIA found that the concerned environmental issues would be acceptable after implementation of mitigation measures.
PC161		Unsatisfied with the mitigation measures on air quality, ecology and landscape & visual impact	moderate	Air Quality Ecology Landscape & Visual	The EIA have assessed the concern issues, the impacts would be minimized and acceptable after the implementation of mitigation measures.
PC162		Disagree with the conclusions about rejecting Soko Islands, Siu Ah Chau and Tai Ah Chau. Criticize the use of thermal treatment technology.	detailed	Site Selection Marine Ecology Engineering setting and technology Alternatives	The project proponent (ie. EPD) have systematically evaluated all of the potential sites, the EIA have considered the alternatives, and the population in the vicinity of the proposed plant was considered.
PC163		Object to the use of SKC site due to the induced visual impact to South Lantau	mentioned	Site Selection Landscape and Visual	The project proponent have systematically evaluated all of the potential sites. Aesthetic design would be adopted to minimize the visual impact.
PC164		Question why other sites are not considered	none	Site Selection	The project proponent have systematically evaluated all of the potential sites. Alternatives have been considered in the EIA
PC165		Object to the use of SKC site. Question the acceptability of the environmental impact.	moderate	Site Selection Water Quality Noise Ecology Traffic	The EIA has assessed the Air Quality, Noise, Water Quality and Ecological Impact, mitigation measures would be implemented, the environmental impact are considered acceptable.
PC166	1	Agree the implementation of IWMF if it can adjust the emission standard of the EIA to a higher and more stringent standards. Criticize the adopted performance standard in the EIA, uncertainty of the environmental performance of the technology, insufficient coverage of environmental impacts and the absence of effective mitigation measures. Suggest the use of more comprehensive waste management strategy and policy	detailed	Air Quality Noise Water Quality Waste Management Policy Engineering Setting and Technology	The technology selected was evaluated in depth and the environmental performance would be comply with the standards. The relevant activities and their environmental impacts have been included in the EIA. The suggestions are noted.
PC167		Object the project as it is not sufficient to process the waste generated in Hong Kong. Disagree with the site selection of SKC as it have worse environmental and ecological impact than TTAL.	mentioned	Waste Management Policy Site Selection Ecology	The Hong Kong government has initiated a comprehensive waste management policy framework and the IWMF is needed. The EIA has assessed the ecological impact and the impact is considered acceptable after the implementation of mitigation measures.
PC168		Support the project but criticize the the EIA did not adopt the new Air Quality Objective and assess the cumulative impact of all planned infrastructures. Urge the EPD to have initiatives to reduce the production of waste.	moderate	Air Quality Cumulative Impact	Meeting the existing AQOs remains the statutory requirement under the EIA Ordinance, the EIA have included the cumulative impact assessment. Reiterate that the Hong Kong government has initiated a comprehensive waste management policy framework,
PC169		Argue that the PATH model used in the Air Quality Impact Assessment was flawed and cannot produce the reasonably worst case predictions, ie. the emission inventory did not take into account the possible further infrastructure development in Hong Kong and Guangdong Province, the ozone prediction was not disclosed, and the sensitivity of the model on input assumptions are unexplained.	detailed	Air Quality	The PATH model are based on confirmed information and reasonable conservative assumptions. The emission inventory has taken into account the worst emission year for relevant emission sources. There will be control and stack monitoring system to ensure the compliance.
PC170		Argue that the construction method is flawed, with the steel piled cofferdams is impractical in Hong Kong's high wave during the monsoon period	detailed	Engineering setting and technology	The cofferdams design would be able to withstand the challenges.

**Appendix 6.1 Summary of Comments and Response of Comment of Development of the Integrated Waste Management Facilities Phase 1 EIA**

No	Duplicate	Summary of Comment	Explanation	Aspect	Summary of Response
PC172		Object to the project due to the permant loss of habitat for Finless Porpoise. Disagree that the project is sustainable.	detailed	Marine Ecology Waste Management Policy	The EIA have assessed the ecological impact and the impact would be acceptable after the implemmentation of mitigation measures. The Hong Kong government has initated a comprehensive waste management policy framework
PC176		Similar to PC158. Added that the consultation are not done properly, and the project is a waste of public revenue.	N/A	Consultation	There have been consulation sessions with the distruct council and local communities.
PC177		Object to the SKC site as it's ecological value, and the planning objective was considered as conservation and sustainable recreation. Critisize that the EIA did not cover the potential ecological impacts. Arge that the TTAL site is better than SKC	detailed	Ecology Site selection	The EIA have considered the high ecological values at SKC, mitigation measures have been proposed. The EIA found both SKC and TTAL site are acceptable under three different scenarios.
PC178	22	Disagree that the SKC is the prefered option, due to time, cost, air pollution, ecological, scenary and tourism impact to SKC and Cheung Chau. Urge the EPD to extent the public consultation.	moderate	Site Selection Air Quality Ecology Landscape & Visual Tourism	The EIA found both of the sites were environmentally acceptable under three different senarios. Mitigation measures have been proposed at the SKC sites to minimize and mitigate the potential impacts. The IWMF will have an education centre and provide recreation and leisure facilities for visitors.
PC179	4	Disagree that the SKC is the prefered option, as SKC was designated as a potential conservation area, also the time, cost, air pollution, ecological, scenary and tourism impact to SKC and Cheung Chau. Argue that TTAL is a better site, and the alternative proposal should be considered. Unstatisfied with the public consultation process	moderate	Site Selection Air Quality Ecology Landscape & Visual Tourism Alternatives Consultation Process	The EIA found both of the sites were environmentally acceptable under three different senarios. Mitigation measures have been proposed at the SKC sites to minimize and mitigate the potential impacts. The IWMF will have an education centre and provide recreation and leisure facilities for visitors. The EPD have studied the potential technologies and concluded that the moving grate incineration would be the suitable core technology. The Hong Kong government has consulted the district councils and local communities.
PC181	1	Disagree that SKC is a proper site, aruge that reclaiming land at SKC will cause unacceptable impact to the marine ecology.	moderate	Site Selection Marine Ecology	With the implementation of mitigation measures, the ecological impact would be acceptable.
PC183		Object to the proposal 'at this location', comment that the proposal would adversely affect the natural beauty of the site and is the result of failure in tackling the waste prodiction problem	mentioned	Landscape & visual	The Hong Kong government has initated a comprehensive waste management policy framework. The EIA found both of the sites were environmentally acceptable under three different senarios.
PC185		Argue that the SKC site have high ecological value and should be preserved	moderate	Ecology	Reiterate that the ecological impact would be acceptable after the implementation of mitigation measures
PC186	2	Further to the comments in PC178, added that the project would adversely affect the health, livelihood the fisheries industry at Cheung Chau. Comment that the site selection is a political decision that ignore the views of residents in Cheung Chau	moderate	Site Selection Air Quality Ecology Landscape & Visual Tourism Fisheries	The Hong Kong government has consutled the district council and local communities. The EIA found both of the sites were environmentally acceptable under three different senarios. Mitigation measures have been proposed at the SKC sites to minimize and mitigate the potential impacts. The IWMF will have an education centre and provide recreation and leisure facilities for visitors.
PC202		Object to the use of SKC site, as it is a lovely island that should be presered	mentioned	Site Selection Marine Ecology Landscape & Visual	The EIA has assessed the ecological impact and the effect would be minimized through implementation of mitigation measures
PC204		Object to the use of SKC site as it is a wildlife sanctuary and a tourist attraction. The emitting flume will taint the view of the south coast of Lantau.	mentioned	Site Selection Ecology Landscape & Visual	The EIA have assessed and proposed mitigation measures of the ecological, landscape & visual and air quality impact. The impact would be acceptable/ complied with the objective standards.

# Appendix 6.1 Summary of Comments and Response of Comment of Development of the Integrated Waste Management Facilities Phase 1 EIA

No	Duplicate	Summary of Comment	Explanation	Aspect	Summary of Response
PC208		Comment that the Hong Kong government have no intention to reduce waste production. Argue that the TTAL site is better than the SKC site as there would be less ecological and fishery impact, and using the SKC site would induce visual impact and light pollution to South Lantau. Disagree with the reasons of choosing the SKC site over TTAL site, ie. population are further away, synergy with community and tourism and balance through Hong Kong of such facilities	detailed	Waste management Policy Site Selection Ecology Landscape & Visual	The Hong Kong government has initiated a comprehensive waste management policy framework and the IWMF is needed. The EIA found both of the sites were environmentally acceptable under three different scenarios. The EIA have assessed the relevant impacts and mitigation measures would be implemented to minimize the impact. The residual impact would be acceptable.
PC209		Concerns over the ecological impact at SLC site. Urge the Hong Kong government to design the marine park near SKC as soon as possible, disclose the information such as construction period and cost of the SKC and TTAL options for further public engagement, and speed of the implementation of recommended measures in the Municipal Solid Waste Management Policy Framework.	detailed	Ecology Waste Management Policy	The Hong Kong government has initiated a comprehensive waste management policy framework and the IWMF is needed. The EIA found both of the sites were environmentally acceptable under three different scenarios. The EIA have assessed the relevant impacts and mitigation measures would be implemented to minimize the impact
PC210		Object to the use of SKC site as the scenic beauty and environmental value of the site. Suggest that the TTAL site is better.	mentioned	Landscape & Visual Ecology	The EIA found both of the sites were environmentally acceptable under three different scenarios.
PC211		Object to the use of SKC site and the EIA Argue that the use of SKC site is environmentally unacceptable and the TTAL site is better for the costs, convenience, time and environmental consequences.	mentioned	Site Selection	The EIA found both of the sites were environmentally acceptable under three different scenarios.
PC212		Question that whether the SKC site is the best option. Criticize that the EIA do not adopt the new Air Quality Objective Standards. Urge the government to charge the disposal of commercial and industrial waste to reduce the production of waste	detailed	Site Selection Air Quality Waste Management Policy	The Hong Kong government has initiated a comprehensive waste management policy framework and the IWMF is needed. It is a statutory requirement under the EIA Ordinance to meet the existing AQOs. The EIA found both of the sites were environmentally acceptable under three different scenarios.
PC213		Criticize that the Hong Kong government put little effort to reduce the production of waste and lack of an effective recycling system. Urge the government to implement waste avoidance at the source measures.	N/A	Waste Management Policy	The Hong Kong government has initiated a comprehensive waste management policy framework and the IWMF is needed. It is a statutory requirement under the EIA Ordinance to meet the existing AQOs. The EIA found both of the sites were environmentally acceptable under three different scenarios.
PC214		Object to the EIA, concerned about the environmental impact at both of the SKC and TTAL sites, ie. the ecological impact at SKC, and the ecological and air quality impact of the TTAL site. Question about the potential under-utilization of the IWMF plant. Urge the Hong Kong government to take a holistic approach to handle waste problem	detailed	Ecology Air Quality Waste Management Policy	The EIA has assessed the potential ecological impact, mitigation measures will be implemented to minimize the impacts. The IWMF will adopt advanced air pollution control to ensure compliance. The government will keep on monitoring and reviewing the waste assignments to the refuse transfer station and implement the next stage of Producer Responsibility Scheme.
PC291		Suggest the Hong Kong government to encourage producer responsibility and waste minimisation. Criticize that the criteria for excluding potential sites, construction cost are not included in the report. Question about the reason selection justification of adopting incineration over mechanical treatment technology. Commented that the air quality impact assessment would be based on WHO guidelines instead of the old AQOs. Commented that the assessment to marine biodiversity applied different criteria for each of the proposed sites.	detailed	Waste Management Policy Engineering setting and Technology Ecology Air Quality	The EIA found both of the sites were environmentally acceptable under three different scenarios. Cost is not one of the environmental considerations in the EIA study. The decision on the technology has taken into consideration the recommendations of the Advisory Group on Waste Management Facilities. It is a statutory requirement under the EIA Ordinance to meet the existing AQOs. The EIA has assessed the marine ecology impact and mitigation measures will be implemented.
PC292		Object to the use of SKC site and question the need of the project. Criticize that the EIA did not consider the alternative waste management schemes, the ecological value of SKC and the harmful effects to humans and other species by Air pollution	mentioned	Alternatives Ecological Impact Air Quality Impact Health Impact	The EIA has assessed the ecological, air quality and health impact mitigation measures would be implemented and the impact would be environmentally acceptable.

# Appendix 6.1 Summary of Comments and Response of Comment of Development of the Integrated Waste Management Facilities Phase 1 EIA

No	Duplicate	Summary of Comment	Explanation	Aspect	Summary of Response
PC293	1	Argue that the use of SLC site in environmentally unacceptable, as the potential risks induced by strong wind and tropical storm, air pollution and ecological impact. Comment that the use of SKC site contradict to the New Territories Development Strategy Review, take too much time, the public consultation was too short. Urge the government to use other technology.	moderate	Site Selection Ecology Air pollution Alternatives Engineering Setting and Technology	The technology selected and potential sites were evaluated in depth, the EIA has assessed the Ecological and Air Quality impacts and mitigation measures would be implemented. The government has consulted the district council and local communities.
PC294		Criticize that the EIA fails to provide objective comparison for the short-listed sites and insufficient information on the disturbance and re-suspension of seabed sediments. Comment about the accuracy of the water modeling result as uncertainty about the current velocity data and discharge of brine water from desalination plant. Argue that the terrestrial and marine ecology impacts are underestimated as did not take the light, velocity, sediment, noise and other factors into account. Argue that the mitigation measures are insufficient and some methods like coral translocation was tested. Disagree with the findings of the fisheries impact as the methodology used is weak and with outdated data.	detailed	Ecology Water Quality Noise Fisheries	Explained that what assumptions were taken in the EIA and their justification. The assessment have included all the relevant factors in the ecology, air quality, water quality, noise and fisheries impact assessment. Mitigation measures would be implemented to minimize the impact and the residual impact would be acceptable.
PC295		Summarised views collected from a public seminar. Urge the government to show intention to implement waste reduction, widen recycling measures and public education. Mentioned that the members of the district council object to the use of SKC site due to the air pollution, fisheries and ecological impact.	N/A	Waste Management Policy	The Hong Kong government has initiated a comprehensive waste management policy framework. The government has consulted the district council and local communities. The EIA followed the EIA Ordinance and Technical Memorandum and the impacts would be acceptable after the implementation of mitigation measures under three different scenarios.
PC296		Suggest that the IWMF is not enough to solve all the waste issues in Hong Kong, urge the Hong Kong government to introduce measures to reduce waste reduction and boost recycling rate. Agree that the SKC site is a suitable site for the IWMF due to the environmental and social factors and support the proposed mitigation measures.	moderate	Waste Management Policy Air Quality Ecology	The Hong Kong government has initiated a comprehensive waste management policy framework and the IWMF is needed.
PC298		Criticize that there is a lack of initiatives in waste reduction and recycling. Urge the Hong Kong government to take steps forward and concentrate of waste reduction.	N/A	Waste Management Policy	The Hong Kong government has initiated a comprehensive waste management policy framework and the IWMF is needed.
PC299		Object to the use of SKC site and argue that the EIA is biased to make SKC site appears to be environmentally acceptable. Argue that the SKC site is environmentally unacceptable due to its impact on air quality, ecology, scenic and tourism value. Comment that the public consultation was inadequate.	moderate	Site Selection Ecology Air Quality Landscape & Visual Tourism Public Consultation	The potential sites and technology were evaluated in depth. The air quality, ecological impact and Landscape & Visual impact were assessed in the EIA, mitigation measures would be implemented to minimize the impact and the impact would be acceptable. The IWMF would provide recreation and leisure facilities to attract visitors. The government have consulted the district council and local communities.
PC301		Support the project. Ask EPD to amend and explain various description and wordings in the report. Suggestion on some of the implementation on monitoring and mitigation measures.	Detailed	Air Quality Marine Ecology Water Quality Technical Description Monitoring	Explain the justification of the description. The typo and suggestions about the mitigation measures are noted.
PC302		Object to the use of SKC site as it have higher ecological value and impact than the TTAL site. Argue that the ecological impact assessment as the ecological survey did not cover all the seasons and lacked surveys on seabird. Argue that the assessment on the White-bellied Sea Eagle is incomprehensive and the mitigation measures are insufficient.	detailed	Ecology Site selection	The EIA found both of the sites were environmentally acceptable under three different scenarios. The ecological survey methodology followed the requirements under the EIA ordinance, impacts to on the White-bellied Sea Eagle, mitigation measures would be implemented to minimise the impact and monitoring programme would be set up.

# Appendix 6.1 Summary of Comments and Response of Comment of Development of the Integrated Waste Management Facilities Phase 1 EIA

No	Duplicate	Summary of Comment	Explanation	Aspect	Summary of Response
PC304		Argue that without an advanced form of recycling, the IWMF would produce hazardous emissions and the temperature used is too low.	mentioned	Engineering Setting and Technology	The IWMF will adopt advanced technologies and follow the most stringent emission standard. The EIA found both of the sites were environmentally acceptable under three different scenarios. Chemical and Clinical Waste are managed separately in Hong Kong.
PC305		Comment that the EIA report do not enable the reader to understand what 'Phase 1 of the project' is. Question the basis that the EIA adopt a flexible approach without specific location and time frame of the first facility. Ask about the comparison of air quality impact of the two site option and question the factor that decide the priority of one site over the other.	moderate	Air Quality Technical Description	The EIA report have presented all the consideration about the potential sites, the details on the scope of the project, the air quality assessment methodology and the comparison.
PC309		Urge the Hong Kong government to consider other alternatives. Argue that TTAL is a better site than SKC, and suggest the alternative proposal by Green Island Cement is a suitable option.	moderate	Site Selection Alternative	The potential sites for IWMF has been studied and evaluated in depth. The government invited companies from Hong Kong and overseas to submit expression of interest to identify the right technology, and then reviewed by the Advisory Group on Waste Management Facilities
PC311		Disagree with the justification of the site selection, while Cheung Chau as the sensitive receivers from the SKC site, it has similar characteristics with the rejected sites. Argue that the TTAL site is the better option as its location and affect less population. Criticize that the Air quality Assessment did not take the Souther Monsoon into account. Question about the stack height and visualization of the stack plume. Question about the details of the implementation of ecological mitigation measures, and point out there are other rare species in SKC site and there are cancer risk arising from exposure to compounds. Disagree that the project would bring positive synergy effects of jobs and business opportunities to Cheung Chau economy. Comment that the waste recovery rate in Hong Kong is not good enough and consider long term alternative options.	detailed	Site Selection Air Quality Ecology Landscape & Visual Waste Management Policy Engineering Setting and Technology	Explained that the rejected sites were due to various other factors. The EIA found both of the sites were environmentally acceptable under three different scenarios. The engineering and technology setting was recommended by the Advisory Group on Waste Management Facilities. The EIA has included the regional emission inventory and wind direction. The ecological impact have been assessed and the mitigation implementation was described in the EIA. The emission temperature would be controlled and the plume would not be visible. The Hong Kong government has initiated a comprehensive waste management policy framework.
PC312		Object to the use of SKC site as it induce impact to the habitat of rare species, air pollution to Cheung Chau, and suggest that TTAL is a better site than SKC. Disagree that the project would create tourism opportunity to Cheung Chau. Comment that the public consultation period is not long enough and the government should have better waste management approach to reduce waste production	moderate	Site Selection Air Quality Ecology Tourism Waste Management Policy	The potential sites for IWMF has been studied and evaluated in depth. The EIA has assessed the Air Quality and Ecological impact, mitigation measures would be implemented and the residual impact would be acceptable. The IWMF would provide recreation and leisure facilities to attract visitors. The government invited companies from Hong Kong and overseas to submit expression of interest to identify the right technology, and then reviewed by the Advisory Group on Waste Management Facilities
PC314		Criticize that the selection of SKC site lack public consultation and contradict to the South West New Territories Development Strategy. Comment that the information released by EPD was misleading, the technology used is insufficient, the project would induce adverse impact to the air quality and ecology and the construction & operation cost are high. Disagree with the justification of the site selection process.	moderate	Site Selection Air Quality Ecology Public Consultation	The EIA found both of the sites were environmentally acceptable under three different scenarios. The technology selected and potential sites were evaluated in depth, and then consulted with the Advisory Group on Waste Management Facilities. The Hong Kong government has initiated a comprehensive waste management policy framework. The EIA has assessed the Air Quality and Ecological impact, mitigation measures would be implemented and the residual impact would be acceptable.
LP001		Argue that the TTAL site is better than the SKC site.	none	Site Selection	The EIA found both of the sites were environmentally acceptable under three different scenarios.

**Appendix 6.1 Summary of Comments and Response of Comment of Development of the Integrated Waste Management Facilities Phase 1 EIA**

No	Duplicate	Summary of Comment	Explanation	Aspect	Summary of Response
LP002		Disagree that the SKC is the preferred option, due to time, cost, air pollution, ecological, scenario and tourism impact to SKC and Cheung Chau. Urge the EPD to extend the public consultation.	moderate	Site Selection Air Quality Ecology Landscape & Visual Tourism	The EIA found both of the sites were environmentally acceptable under three different scenarios. Mitigation measures have been proposed at the SKC sites to minimize and mitigate the potential impacts. The IWMF will have an education centre and provide recreation and leisure facilities for visitors.
LP003		Suggest that the Hong Kong government should first implement initiatives to support recycling, and make long term waste management strategies to reduce waste production. Disagree that the technology is sufficient to mitigate the potential pollution emitted from the IWMF.	mentioned	Waste Management Policy Engineering setting and Technology	The Hong Kong government has initiated a comprehensive waste management policy framework, IWMF is needed. The IWMF will adopt advanced technology and would comply with the most stringent EU standards.
LP004		Disagree that the SKC is the preferred option, due to time, cost, air pollution, ecological, scenario and tourism impact to SKC and Cheung Chau. Urge the EPD to extend the public consultation. Argue that TTAL is a better site, and the alternative proposal should be considered. Unsatisfied with the public consultation process	moderate	Site Selection Air Quality Ecology Landscape & Visual Tourism Alternatives Public Consultation	The EIA found both of the sites were environmentally acceptable under three different scenarios. Mitigation measures have been proposed at the SKC sites to minimize and mitigate the potential impacts. The IWMF will have an education centre and provide recreation and leisure facilities for visitors. The EPD have studied the potential technologies and concluded that the moving grate incineration would be the suitable core technology. The Hong Kong government has consulted the district councils and local communities.
LP005		Criticize that the Hong Kong government did not put effort to reduce the waste production. Disagree that the technology is sufficient to mitigate the potential pollution emitted from the IWMF. Urge the Hong Kong government to support the recycling industry and implement waste reduction from source policy.	mentioned	Waste Management Policy Engineering setting and Technology	The Hong Kong government has initiated a comprehensive waste management policy framework, IWMF is needed. The IWMF will adopt advanced technology and would comply with the most stringent EU standards.



## Appendix 7.1 Environmental Permits and Requirement of Liaison

Register Number	Project	Applicant	Valid EP(s)	Requirement of Liaison	Details
AEIAR-219/2018	Lei Yue Mun Waterfront Enhancement Project	Civil Engineering and Development Department	EP-564/2018	Community Liaison Hotline	A hotline shall be set up prior to the commencement of construction and shall be operated during the construction of the Project to handle complaints, comments, suggestions or requests for information from the public.
AEIAR-216/2018	Intermodal Transfer Terminal - Bonded Vehicular Bridge and Associated Roads	Airport Authority Hong Kong	EP-560/2018	No	
AEIAR-218/2018	Hong Kong Offshore LNG Terminal	CLP Power Hong Kong Limited	EP-558/2018	Stakeholder Liaison Group	To enhance transparency and communication with the public, the Permit Holder shall, no later than 2 weeks before the commencement of construction of the Project, set up a Stakeholders Liaison Group comprising relevant experts and stakeholders to facilitate communications, enquiries and complaints handling on environmental issues related to the Project.
EIAR-217/2018	Proposed Interim Sewage Treatment Plant and Effluent Reuse Facility at Wo Shang Wai, Yuen Long	Civil Engineering and Development Department	EP-557/2018	No	
AEIAR-215/2017	Housing Sites in Yuen Long South	Civil Engineering and Development Department	EP-553/2018, EP-552/2018, EP-551/2018, EP-550/2018, EP-549/2018, EP-548/2018, EP-547/2018	No	
AEIAR-214/2017	Siu Ho Wan Station and Siu Ho Wan Depot Replanning Works	MTR Corporation Limited		No	
AEIAR-213/2017	Proposed Comprehensive Residential and Commercial Development atop Siu Ho Wan Depot	MTR Corporation Limited		No	
AEIAR-212/2017	Improvement Dredging for Lamma Power Station Navigation Channel	The Hong Kong Electric Company Limited	EP-535/2017	No	
AEIAR-211/2017	Mui Wo Lai Chi Yuen Cemetery Extension	Food and Environmental Hygiene Department	EP-532/2017, EP-532/2017/A	No	
AEIAR-208/2017	A Rooftop Helipad at the Proposed New Block of Queen Mary Hospital	Food and Health Bureau	EP-522/2017	No	
AEIAR-203/2016	Hung Shui Kiu New Development Area	Civil Engineering and Development Department	EP-531/2017, EP-530/2017, EP-529/2017, EP-528/2017, EP-527/2017, EP-526/2017	No	
AEIAR-204/2017	Kai Tak Multi-Purpose Sports Complex	Architectural Services Department	EP-544/2017	Community Liaison Hotline	A hotline shall be set up prior to the commencement of construction and shall be operated during the construction of the Project to handle complaints, comments, suggestions or requests for information from the public. The Permit Holder shall notify the Director the date of setting up the hotline and the contact details of the hotline at least two weeks before the commencement of construction of the Project. The contact details of the hotline shall be made available to the public via the dedicated website to be set up by the Permit Holder as described in Condition 4.2 of this Permit.
AEIAR-210/2017	Outlying Islands Sewerage Stage 2- South Lantau Sewerage Works	Drainage Services Department	EP-538/2017	No	
AEIAR-207/2017	Expansion of Sha Tau Kok Sewage Treatment Works	Drainage Services Department	EP-517/2017	No	
AEIAR-206/2017	Port Chelter Sewerage Stage 3 - Sewage Works at Po Toi O	Drainage Services Department	EP-516/2017	No	
AEIAR-209/2017	Outlying Islands Sewerage Stage 2 - Upgrading of Tai O Sewage Collection, Treatment and Disposal Facilities	Drainage Services Department	EP-542/2017	No	
AEIAR-205/2017	Proposed Low-rise and Low-density Residential Development at Various Lots and their Adjoining Government Land in D.D. 104, East of Kam Pok Road, Mai Po, Yuen Long, N.Y.	Glory Queen Limited	EP-515/2017	No	
AEIAR-200/2016	Elevated Pedestrian Corridor in Yuen Long Town Connecting with Long Ping Station	Highways Department	EP-525/2017	No	

Register Number	Project	Applicant	Valid EP(s)	Requirement of Liaison	Details
AEIAR-202/2016	Sha Tin Cavern Sewage Treatment Plant	Drainage Service Department	EP-533/2017	Community Liaison Group(s) and Hotline	To enhance transparency and communication with the public, the Permit Holder shall, no later than 1 month before the commencement of construction of the Project, set up Community Liaison Group(s) comprising the Environmental Team (ET) Leader and the Independent Environmental Checker (IEC) appointed under Conditions 2.3 and 2.8 respectively together with members of affected parties including local residents and relevant professional/experts to facilitate communications, enquiries and complaints handling on all environmental issues relating to the Project. A telephone hotline shall be set up prior to the commencement of construction and shall be operated during the construction of the Project to handle complaints, comments, suggestions or requests for information from the public.
AEIAR-201/2016	Police Facilities in Kong Nga Po	Civil Engineering and Development Department	EP-510/2016	Community Liaison Hotline	A telephone hotline shall be set up prior to the commencement of construction and shall be operated during the construction of the Project to handle complaints, comments, suggestions or requests for information from the public.
AEIAR-199/2016	New Wang Tong River Bridge	Highway Department	EP-555/2018	No	
AEIAR-197/2016	Additional Gas-fired Generation Units Project	Castle Peak Power Company Limited	EP-507/2016, EP-507/2016/A, FEP-01/507/2016, FEP-02/507/2016/A	No	
AEIAR-198/2016	Site Formation and Associated Infrastructureal Works for Development of Columbarium, Crematorium and Related Facilities at Sandy Ridge Cemetery	Civil Engineering and Development Department	EP-534/2017, FEP-01/534/2017	No	
AEIAR-195/2016	Development of Anderson Road Quarry site - Road Improvement Works	Civil Engineering and Development Department	EP-513/2016	Community Liaison Hotline	A hotline shall be set up prior to the commencement of construction and shall be operated during the construction of the Project to handle complaints, comments, suggestions or requests for information from the public.
AEIAR-194/2016	Development of Anderson Road Quarry site - Rock Cavern Developments	Civil Engineering and Development Department	EP-513/2016	Community Liaison Hotline	A hotline shall be set up prior to the commencement of construction and shall be operated during the construction of the Project to handle complaints, comments, suggestions or requests for information from the public.
AEIAR-196/2016	Tung Chung New Town Extension	Civil Engineering and Development Department	EP-519/2016	No	
AEIAR-193/2015	Operation of the Existing Tai Lam Explosives Magazine at Tai Shu Ha, Yuen Long for Liantang / Heung Yuen Wai Boundary Control Point Project	Dragages Hong Kong Ltd.	EP-502/2015, EP-502/2015/A	No	
AEIAR-191/2015	Chai Wan Government Complex and Vehicle Depot	Hong Kong Police Force	EP-504/2015, EP-505/2015	No	
AEIAR-192/2015	Desalination Plant at Tseung Kwan O	Water Supplies Department	EP-503/2015, EP-502/2013/A	No	
AEIAR-190/2015	Flyover from Kwai Tsing Interchange Upramp to Kwai Chung Road	Civil Engineering and Development Department	EP-541/2017	No	
AEIAR-189/2015	Comprehensive Development and Wetland Protection near Yau Mei San Tsuen	Asia King Development Limited	EP-500/2015	No	
AEIAR-188/2015	Alternative Ground Decontamination Works at the Proposed Kennedy Town Comprehensive Development Area Site	Civil Engineering and Development Department	EP-136/2002, EP-136/2002/A, EP-136/2002/B, EP-136/2002/C, EP-136/2002/D, EP-136/2002/E	No	
AEIAR-186/2015	Decommissioning of West Portion of The Middle ASH Lagoon at Tsang Tsui, Tuen Mun	Food and Environmental Hygiene Department	EP-497/2015	No	
AEIAR-187/2015	In-situ Reprovisioning of Sha Tin Water Treatment Works - South Works	Water Supplies Department	EP-494/2015	No	

Register Number	Project	Applicant	Valid EP(s)	Requirement of Liaison	Details
AEIAR-185/2014	Expansion of Hong Kong International Airport into a Three-Runway System	Airport Authority Hong Kong	EP-489/2014	Community and Professional Liaison Groups	To enhance transparency and communication with the public, the Permit Holder shall, no later than 3 months before the commencement of construction of the Project, set up Community and Professional Liaison Groups respectively comprising members of affected parties including local residents and relevant professional/experts to facilitate communications, enquiries and complaints handling on all environmental issues related to the Project. The Permit Holder shall take a proactive approach to disseminate information to the groups, promote community cooperation and participation and implement suitable local environmental enhancement works. All relevant information of the Project including the detailed design, the progress of construction and operation and environmental monitoring and audit results shall be provided to the groups. The Permit Holder shall inform the Director in writing the membership and terms of reference of the two groups. The Permit Holder shall make the minutes of the groups' meetings and all papers and documents available to the public through a website.
AEIAR-183/2014	Development of Anderson Road Quarry	Civil Engineering and Development Department	EP-513/2016	Community Liaison Hotline	A hotline shall be set up prior to the commencement of construction and shall be operated during the construction of the Project to handle complaints, comments, suggestions or requests for information from the public.
AEIAR-184/2014	Tai Shue Wan Development at Ocean Park	Ocean Park Corporation	EP-487/2014	No	
AEIAR-182/2014	Proposed Residential Cum Passive Recreation Development within "Recreation" Zone and "Residential (Group C)" Zone at Various Lots In D.D 104, Yuen Long, N.T.	Capital Chance Ltd	EP-484/2014	Community Consultation	Before the commencement of construction of the Project, the Permit Holder shall consult the nearby affected communities, including Bethel High School, on the design and materials to be used for the site boundary walls and noise barriers so as to blend in with the local environment.
AEIAR-181/2013	Outlying Island Sewerage Stage 2 - Upgrading of Cheung Chau Sewage Collection, Treatment and Disposal Facilities	Drainage Services Department	EP-488/2014	No	
AEIAR-180/2013	Development of Organic Waste Treatment Facilities, Phase 2	Environmental Protection Department	EP-460/2013	No	
AEIAR-179/2013	Proposed Road Improvement Works in West Kowloon Reclamation Development Phase 1	Highways Department	EP-455/2013	Community Liaison Hotline	A hotline shall be set up prior to the commencement of construction and shall be operated during the construction of the Project to handle complaints, comments, suggestions or requests for information from the public. The Permit Holder shall notify the Director the date of setting up the hotline and the contact details of the hotline at least 2 weeks before the commencement of construction of the Project. The contact details of the hotline shall be made available to the public via the dedicated website to be set up by the Permit Holder as described in Condition 4.2 of this Permit.
AEIAR-177/2013	Reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum-vehicle Depot at Yen Ming Road, West Kowloon Reclamation Area	Food and Environmental Hygiene Department	EP-454/2013	No	
AEIAR-178/2013	West Kowloon Cultural District	West Kowloon Cultural District Authority	EP-453/2013, EP-453/2013 /A	No	
AEIAR-174/2013	Trunk Road T2	Civil Engineering and Development Department	EP-451/2013	No	
AEIAR-175/2013	North East New Territories New Development Areas	New Territories North and West Development Office, Civil Engineering and Development Department	EP-465/2013, EP-466/2013, EP-467/2013, EP-468/2013, EP-469/2013, EP-470/2013, EP-471/2013, EP-472/2013, EP-473/2013, EP-474/2013, EP-01/474/2013, EP-475/2013, EP-476/2013	No	
AEIAR-176/2013	Development of Lok Ma Chau Loop	Civil Engineering and Development Department	EP-477/2013	No	

Register Number	Project	Applicant	Valid EP(s)	Requirement of Liaison	Details
AEIAR-173/2013	Tseung Kwan O – Lam Tin Tunnel and Associated Works	Civil Engineering and Development Department	EP-458/2013, EP-458/2013/A	Community Liaison Groups	Before the commencement of construction of the Project, the Permit Holder shall set up community liaison groups (CLGs) comprising representatives of affected parties, including local committees, residents and schools in the affected areas along the route alignments, to facilitate communications, enquiries and complaint handlings on environmental issues related to the project. Respective community liaison teams and designated complaint hotlines shall be set up for the project to address related concerns and enquiries in an efficient manner. The Permit Holder shall also follow up with the respective CLGs on the implementation of mitigation measures as necessary. The Permit Holder shall notify the Director the date of setting up the CLGs, the membership, the terms of reference and the contact details at least one month before the commencement of construction of the Project.
AEIAR-172/2013	Cross Bay Link, Tseung Kwan O	Civil Engineering and Development Department	EP-459/2013	Community Liaison Groups	Before the commencement of construction of the Project, The Permit Holder shall set up community liaison groups (CLGs) comprising representatives of affected parties, including local committees, residents and schools in the affected areas along the route alignments, to facilitate communications, enquiries and complaint handlings on environmental issues related to the project. Respective community liaison teams and designated complaint hotlines shall be set up for the project to address related concerns and enquiries in an efficient manner. The Permit Holder shall also follow up with the respective CLGs on the implementation of mitigation measures as necessary. The Permit Holder shall notify the Director the date of setting up the CLG, the membership, the terms of reference and the contact details at least one month before the commencement of construction of the Project.
AEIAR-171/2013	Central Kowloon Route	Major Works Project Management Office, Highways Department	EP-457/2013, EP-457/2013/A, EP-457/2013/B	Community Liaison Groups	Before the commencement of construction of the Project, the Permit Holder shall set up community liaison groups (CLGs) comprising representatives of affected parties, including local committees, residents and schools in the affected areas along the route alignment, to facilitate communications, enquiries and complaint handlings on environmental issues related to the Project. Respective community liaison teams and a designated complaint hotline shall be set up for the Project to address related concerns and enquiries in an efficient manner. The Permit Holder shall also follow up with the respective CLGs on the implementation of mitigation measures as necessary. The Permit Holder shall notify the Director the date of setting up the CLG, the membership, the terms of reference and the contact details at least one month before commencement of construction of the Project.
AEIAR-170/2013	Kai Tak Development – Roads D3A & D4A	Civil Engineering and Development Department	EP-445/2013 , EP-445/2013 /A	No	
AEIAR-169/2013	Drainage Improvement Works at Ngong Ping	Drainage Services Department	EP-456/2013	Further Consultation with stakeholders	The Permit Holder shall arrange further meeting with the stakeholders (including the local residents, Po Lin Monastery, Ngong Ping 360 and Green Groups) to collect views on the details of the proposed drainage scheme at the detailed design stage.
AEIAR-168/2012	EMSD Hong Kong Workshop at Sheung On Street, Chai Wan	EMSD	EP-442/2012	No	
AEIAR-163/2012	Development of the Integrated Waste Management Facilities Phase 1	Environmental Protection Department	EP-429/2012 EP-429/2012/A FEP-014/429/2012/A	Community Liaison Group	To enhance transparency and communication with the public, the Permit Holder shall, at least 3 months before the commencement of construction of the Project, set up a Community Liaison Group comprising representatives of concerned and affected parties, including the fishery sector, to facilitate communications, enquires and complaints handling on all environmental issues. The Community Liaison Group shall take a proactive approach to disseminate information to the local community, promote community cooperation and participation and implement suitable local environmental enhancement works. All relevant information of the project including the detailed design, the progress of construction and operation and environmental monitoring and audit results shall be provided to the Community Liaison Group. The Permit Holder shall inform the Director in writing the membership and terms of reference of the Community Liaison Group. The Permit Holder shall make the minutes of the Community Liaison Group meetings and all papers and documents available to the public through a website.

Register Number	Project	Applicant	Valid EP(s)	Requirement of Liaison	Details
AEIAR-167/2012	Shatin to Central Link - Tai Wai to Hung Hom Section	MTR Corporation Limited	EP-416/2011 , EP-436/2012, EP-436/2012/A, EP-436/2012/B, EP-436/2012/C, EP-437/2012, EP-438/2012, EP-438/2012/A, EP-438/2012/B, EP-438/2012/C, EP-438/2012/D, EP-438/2012/E, EP-438/2012/F, EP-438/2012/G, EP-438/2012/H, EP-438/2012/I	Community Liaison Group	The Permit Holder shall set up a Community Liaison Group (CLG) comprising representatives from the relevant concerned and affected parties, including owners' corporations, management offices and local committees, to facilitate communication, enquiries and complaints handling on all environmental issues, including the follow up on the implementation of remedial mitigation measures. The Permit Holder shall set up the CLG before the commencement of construction of the Project. The Permit Holder shall notify the Director the actual date of setting up the CLG, the membership, the terms of reference and the contact details. A designated complaint hotline shall also be set up for the Project to address such concerns and complaints in an efficient manner. The detailed arrangements of the CLG shall be reported to the ENPC.
AEIAR-166/2012	Shatin to Central Link - Hung Hom to Admiralty Section	MTR Corporation Limited	EP-416/2011 , EP-436/2012, EP-436/2012/A, EP-436/2012/B, EP-436/2012/C, EP-437/2012, EP-438/2012, EP-438/2012/A, EP-438/2012/B, EP-438/2012/C, EP-438/2012/D, EP-438/2012/E, EP-438/2012/F, EP-438/2012/G, EP-438/2012/H, EP-438/2012/I	Community Liaison Group	The Permit Holder shall set up a Community Liaison Group (CLG) comprising representatives from the relevant concerned and affected parties, including owners' corporations, management offices and local committees, to facilitate communication, enquiries and complaints handling on all environmental issues, including the follow up on the implementation of remedial mitigation measures. The Permit Holder shall set up the CLG before the commencement of construction of the Project. The Permit Holder shall notify the Director the actual date of setting up the CLG, the membership, the terms of reference and the contact details. A designated complaint hotline shall also be set up for the Project to address such concerns and complaints in an efficient manner. The detailed arrangements of the CLG shall be reported to the ENPC.
AEIAR-165/2012	Shatin to Central Link - Mong Kok East to Hung Hom Section	MTR Corporation Limited	EP-416/2011 , EP-436/2012, EP-436/2012/A, EP-436/2012/B, EP-436/2012/C, EP-437/2012, EP-438/2012, EP-438/2012/A, EP-438/2012/B, EP-438/2012/C, EP-438/2012/D, EP-438/2012/E, EP-438/2012/F, EP-438/2012/G, EP-438/2012/H, EP-438/2012/I	Community Liaison Group	The Permit Holder shall set up a Community Liaison Group (CLG) comprising representatives from the relevant concerned and affected parties, including owners' corporations, management offices and local committees, to facilitate communication, enquiries and complaints handling on all environmental issues, including the follow up on the implementation of remedial mitigation measures. The Permit Holder shall set up the CLG before the commencement of construction of the Project. The Permit Holder shall notify the Director the actual date of setting up the CLG, the membership, the terms of reference and the contact details. A designated complaint hotline shall also be set up for the Project to address such concerns and complaints in an efficient manner. The detailed arrangements of the CLG shall be reported to the ENPC.

Register Number	Project	Applicant	Valid EP(s)	Requirement of Liaison	Details
AEIAR-164/2012	Shatin to Central Link - Stabling Sidings at Hung Hom Freight Yard	MTR Corporation Limited	EP-416/2011 , EP-436/2012, EP-436/2012/A, EP-436/2012/B, EP-436/2012/C, EP-437/2012, EP-438/2012, EP-438/2012/A, EP-438/2012/B, EP-438/2012/C, EP-438/2012/D, EP-438/2012/E, EP-438/2012/F, EP-438/2012/G, EP-438/2012/H, EP-438/2012/I	Community Liaison Group	The Permit Holder shall set up a Community Liaison Group (CLG) comprising representatives from the relevant concerned and affected parties, including owners' corporations, management offices and local committees, to facilitate communication, enquiries and complaints handling on all environmental issues, including the follow up on the implementation of remedial mitigation measures. The Permit Holder shall set up the CLG before the commencement of construction of the Project. The Permit Holder shall notify the Director the actual date of setting up the CLG, the membership, the terms of reference and the contact details. A designated complaint hotline shall also be set up for the Project to address such concerns and complaints in an efficient manner. The detailed arrangements of the CLG shall be reported to the ENPC.
AEIAR-162/2011	Central Police Station Conservation and Revitalisation Project	The Jockey Club CPS Limited	EP-408/2011 , EP-408/2011/A, EP-408/2011/B	Handling Enquiries, Complaint and Requests for Information	To facilitate communications, enquiries and complaints handling on all environmental issues during the construction period of the Project, the Permit Holder shall, no later than one month after commencement of construction of the Project, deposit with the Director four hard copies and one electronic copy of "Proposal of Procedures for Handling Enquiries, Complaints and Request for Information Concerning the Environmental Effects of Construction Works of the Project" ("the Proposal").
AEIAR-161/2011	Liantang / Heung Yuen Wai Boundary Control Point and Associated Works	Civil Engineering and Development Department	EP-404/2011, EP-404/2011/A, EP-404/2011B. EP-404/2011/C		
AEIAR-160/2011	Regulation of Shenzhen River Stage IV	Drainage Services Department	EP-430/2011		
AEIAR-157/2010	Phase III Redevelopment of The Hong Kong Federation of Youth Groups Jockey Club Sai Kung Outdoor Training Camp	The Hong Kong Federation of Youth Groups	EP-410/2010, FEP-01/410/2010, EP-410/2010/A		
AEIAR-159/2011	ShaTin to Central Link Protection Works at Causeway Bay Typhoon Shelter	MTR Corporation Limited	EP-416/2011 , EP-436/2012, EP-436/2012/A, EP-436/2012/B, EP-436/2012/C, EP-437/2012, EP-438/2012, EP-438/2012/A, EP-438/2012/B, EP-438/2012/C, EP-438/2012/D, EP-438/2012/E, EP-438/2012/F, EP-438/2012/G, EP-438/2012/H, EP-438/2012/I	Community Liaison Group	The Permit Holder shall set up a Community Liaison Group (CLG) comprising representatives from the relevant concerned and affected parties, including owners' corporations, management offices and local committees, to facilitate communication, enquiries and complaints handling on all environmental issues, including the follow up on the implementation of remedial mitigation measures. The Permit Holder shall set up the CLG before the commencement of construction of the Project. The Permit Holder shall notify the Director the actual date of setting up the CLG, the membership, the terms of reference and the contact details. A designated complaint hotline shall also be set up for the Project to address such concerns and complaints in an efficient manner. The detailed arrangements of the CLG shall be reported to the ENPC.
AEIAR-158/2011	Integration of Siu Ho Wan and Silver Mine Bay Water Treatment Works	Water Supplies Department	EP-413/2011	No	

Register Number	Project	Applicant	Valid EP(s)	Requirement of Liaison	Details
AEIAR-155/2010	South Island Line (East)	MTR Corporation Limited	EP-407/2010, EP-407/2010/A, EP-407/2010/B, EP-407/2010/C, EP-407/2010/D, EP-407/2010/E	Community Liaison Groups	The Permit Holder shall set up Community Liaison Groups comprising representatives of concerned and affected parties, including owners' corporations, management offices, local committees and schools in the affected areas, to facilitate communication, enquiries and complaints handling on all environmental issues throughout the entire construction period, including the follow up on the implementation of remedial mitigation measures, and other initiatives by the Permit Holder such as Indirect Technical Remedy in the form of upgraded glazing and air conditioning for eligible dwellings affected by construction air-borne noise impact, as well as continuous noise monitoring mechanism and any need for web camera monitoring. The Permit Holder shall notify the Director the date of setting up the Community Liaison Groups at least one month before commencement of construction of the Project. A designated complaint hotline shall also be set up for the Project to address such concerns and complaints in an efficient manner.
AEIAR-154/2010	Kwun Tong Line Extension	MTR Corporation Limited	EP-399/2010, EP-399/2010/A, EP-399/2010/B, EP-399/2010/C	No	(Community Liaison Groups were formed while not required in the EP)
AEIAR-156/2010	Providing Sufficient Water Depth for Kwai Tsing Container Basin and its Approach Channel	Civil Engineering and Development Department	EP-426/2011, EP-426/2011/A	Community Liaison Group	The Permit Holder shall set up a Community Liaison Group (CLG) comprising representatives from the relevant concerned and affected parties, including the fishery sector to facilitate communication, enquiries and complaints handling on all environmental issues for the construction stage of the project. The Permit Holder shall set up the CLG at least 9 months before the commencement of construction of the Project. The Permit Holder shall notify the Director the actual date of setting up the CLG, the membership, the terms of reference and the contact details. A designated complaint hotline shall also be set up for the Project to address such concerns and complaints in an efficient manner.
AEIAR-153/2010	Installation of Submarine Gas Pipelines and Associated Facilities from To Kwa Wan to North Point for Former Kai Tak Airport Development	The Hong Kong and China Gas Company Limited	EP-401/2010	No	
AEIAR-151/2010	Improvement of Fresh Water Supply to Cheung Chau	Water Supplies Department	EP-392/2010, EP-392/2010/A	No	
AEIAR-150/2010	Black Point Gas Supply Project	Castle Peak Power Co. Ltd.	EP-391/2010, FEP-01/391/2010, EP-391/2010/A, FEP-02/391/2010/A	No	
AEIAR-152/2010	Development of a 100MW Offshore Wind Farm in Hong Kong	The Hong Kong Electric Co. Ltd.	EP-394/2010	Stakeholder Liaison Group	The Permit Holder shall, within six months upon the issue of this Permit, set up a Stakeholder Liaison Group comprising representatives of concerned parties, including those related to fishery sector and environmental groups, to advise on the design, construction and operation of the Project. The Permit Holder shall inform the Advisory Council on the Environment (ACE) and the Director in writing the membership and terms of reference of the Stakeholder Liaison Group and shall take into account ACE's views. The Permit Holder shall, within one month of the dates of the meetings, place all minutes of meetings, relevant documents and associated papers of the Stakeholder Liaison Group on the dedicated website set up under section 6 of this Permit.
AEIAR-149/2010	Organic Waste Treatment Facilities, Phase I	Environmental Protection Department	EP-395/2010 , EP-395/2010/A, EP-395/2010/B, FEP-01/395/2010/B	No	
AEIAR-141/2009	Road Works at West Kowloon	MTR Corporation Limited	EP-366/2009, EP-366/2009/A	Community Liaison Group	The Project Proponent shall set up a Community Liaison Group (CLG), comprising representatives of concerned and affected parties, to facilitate communication, enquiries and complaints handling of all environmental issues, including the follow up on the implementation of impact mitigation measures. A designated complaint hotline shall be set up for the Project to address such concerns and complaints in an efficient manner. The Permit Holder shall set up the CLG before the commencement of construction of the Project and maintain the CLG until 6 months after the operation of the Project. The Permit Holder shall notify the Director the actual date of setting up the CLG, the membership, the terms of reference and the contact details before the commencement of construction of the Project.
AEIAR-146/2009	Tuen Mun - Chek Lap Kok Link	Highways Department	EP-354/2009 , EP-354/2009/A, EP-354/2009/B, EP-354/2009/C, EP-354/2009/D	No	

Register Number	Project	Applicant	Valid EP(s)	Requirement of Liaison	Details
AEIAR-145/2009	Hong Kong - Zhuhai - Macao Bridge Hong Kong Boundary Crossing Facilities	Highways Department	EP-353/2009/A, EP-353/2009/B, EP-353/2009/C, EP-353/2009/D, EP-353/2009/E, EP-353/2009/F, EP-353/2009/H, EP-353/2009/I	No	
AEIAR-144/2009	Hong Kong - Zhuhai - Macao Bridge Hong Kong Link Road	Highways Department	EP-352/2009, EP-352/2009/A, EP-352/2009/B, EP-352/2009/C, EP-352/2009/D	No	
AEIAR-147/2009	West New Territories (WENT) Landfill Extensions	Environmental Protection Department	EP-393/2010	Community Liaison Group	To enhance transparency and communication with the public, the Permit Holder shall, within 3 months before the commencement of construction of the Project, set up a Community Liaison Group involving relevant stakeholders and shall take a proactive approach to disseminate information to the local community, promote community cooperation and participation and implement suitable local environmental enhancement works. All relevant information of the project including the detailed design, the progress of construction and operation and environmental monitoring and audit results shall be provided to the Community Liaison Group. The Permit Holder shall inform the Director in writing the membership and terms of reference of the Community Liaison Group. The Permit Holder shall make the minutes of the Community Liaison Group meetings and all papers and documents available to the public through a website.
AEIAR-142/2009	Provision of a Poultry Slaughtering Centre in Sheung Shui	Architectural Services Department	EP-351/2009	No	
AEIAR-143/2009	Hong Kong Section of Guangzhou - Shenzhen - Hong Kong Express Rail Link	MTR Corporation Limited	EP-349/2009, EP-349/2009/A, EP-349/2009/B, EP-349/2009/C, EP-349/2009/D, EP-349/2009/E, EP-349/2009/F, EP-349/2009/G, EP-349/2009/H, EP-349/2009/I, EP-349/2009/J, EP-349/2009/K, EP-349/2009/L	Community Liaison Groups	The Permit Holder shall set up Community Liaison Groups comprising of representatives from the relevant concerned and affected parties, including owners' corporations, management offices, local committees and schools of affected areas, to facilitate communication, enquiries and complaints handling on all environmental issues. The Permit Holder shall set up Community Liaison Groups before the commencement of construction of the Project and maintain the Community Liaison Groups up to the first 12 months of the operation of the Project. The Permit Holder shall notify the Director the date of setting up the Community Liaison Groups, the membership, the terms of reference and the contact details.
AEIAR-140/2009	Hong Kong Offshore Wind Farm in Southeastern Waters	HK Offshore Wind Limited	FEP-01/341/2009	Stakeholder Liaison Group	The Permit Holder shall, within six months upon the issue of this Environment Permit (EP-341/2009), set up a Stakeholder Liaison Group comprising representatives of concerned parties, including those related to fishery sector, environmental and hiking groups, to advise on the design, construction and operation of the project and shall inform the Advisory Council on the Environment (ACE) and the Director in writing the membership and terms of reference of the Stakeholder Liaison Group and should take into account ACE's views. The Permit holder shall, within one month of the dates of the meetings, place all minutes of meetings, relevant documents and associated papers of the Stakeholder Liaison Group on the dedicated website to be set up by the Permit Holder under Condition 5.2 below.
AEIAR-138/2009	Decommissioning of the Co-Combustion Pilot Plant at Tap Shek Kok	Green Island Cement Company Limited	EP-336/2009	No	
AEIAR-137/2009	Phased Reprovisioning of Cape Collinson Crematorium	Food and Environmental Hygiene Department	EP-335/2009, FEP-01/335/2009	No	
AEIAR-139/2009	Upgrading of Remaining Sections of Kam Tin Road and Lam Kam Road	Highways Department	EP-439/2012	No	



Register Number	Project	Applicant	Valid EP(s)	Requirement of Liaison	Details
AEIAR-134/2009	Hang Hau Tsuen Channel at Lau Fau Shan	New Territories North and West Development Office, Civil Engineering and Development Department	EP-343/2009	No	
AEIAR-135/2009	Inter-reservoirs Transfer Scheme (IRTS) - Water Tunnel between Kowloon Byewash Reservoir and Lower Shing Mun Reservoir	Water Supplies Department	EP-345/2009	No	
AEIAR-136/2009	Construction of a Secondary Boundary Fence and new sections of Primary Boundary Fence and Boundary Patrol Road	Secretary for Security	EP-347/2009, FEP-01/347/2009, FEP-02/347/2009, FEP-03/347/2009, EP-347/2009/A, FEP-02/347/2009/A, FEP-04/347/2009/A, FEP-05/347/2009/A	No	
AEIAR-132/2009	Improvement to Pok Oi Interchange	Highways Department	EP-411/2011	No	
AEIAR-133/2009	Construction of Cycle Tracks and the associated Supporting Facilities from Sha Po Tsuen to Shek Sheung River	Civil Engineering and Development Department	EP-450/2013, EP-450/2013/A, EP-501/2015	No	
AEIAR-128/2009	Traffic Improvements to Tuen Mun Road Town Centre Section	Highways Department	EP-342/2009, EP-342/2009/A, EP-342/2009/B, EP-342/2009/C	No	
AEIAR-130/2009	Kai Tak Development	Civil Engineering and Development Department	EP-337/2009, EP-339/2009, EP-344/2009, EP-339/2009/A	No	
AEIAR-131/2009	Development of a Biodiesel Plant at Tseung Kwan O Industrial Estate	ASB Biodiesel (Hong Kong) Limited	EP-319/2009, EP-319/2009/A, EP-319/2009/B, EP-319/2009/C, EP-319/2009/D	No	
AEIAR-129/2009	Sludge Treatment Facilities	Environmental Protection Department	EP-334/2009, FEP-01/334/2009, FEP-01/334/2009/A, EP-334/2009/A, FEP-01/334/2009/B, EP-334/2009/B, EP-334/2009/C, FEP-01/334/2009/C, EP-334/2009/D, FEP-01/334/2009/D	No	
AEIAR-127/2008	Tsim Sha Tsui Station Northern Subway	MTR Corporation Limited	EP-317/2009, EP-317/2009/A	Community Liaison Procedure and Channel	A community liaison procedure and channel shall be set up during the construction of the Project to service complaints, comments, suggestions or requests for information. The Permit Holder shall notify the Director the date of setting up the community liaison channel at least 2 weeks before the commencement of construction of the Project.

Register Number	Project	Applicant	Valid EP(s)	Requirement of Liaison	Details
AEIAR-126/2008	West Island Line	MTR Corporation Limited	EP-313/2008, EP-313/2008/A, EP-313/2008/B, EP-313/2008/C, EP-313/2008/D, EP-313/2008/E, EP-313/2008/F, EP-313/2008/G, EP-313/2008/H, EP-313/2008/I, EP-313/2008/L	Community Liaison Groups	The following measures shall be employed at specific works areas to mitigate construction noise impacts. If variations or other measure(s) not specified below is/are to be used as a result of discussions and agreements at the Community Liaison Groups set up under Condition 2.6, the Director shall be notified of such changes or alternative proposal through the EM&A mechanism under Condition 6.
AEIAR-124/2008	Tsuen Wan Bypass, widening of Tsuen Wan Road between Tsuen Tsing Interchange and Kwai Tsing Interchange, and associated junction improvement works	Civil Engineering and Development Department	N/A		
AEIAR-122/2008	Tuen Mun Area 54 Sewage Pumping Station	Land Works Division, Civil Engineering Office, Civil Engineering and Development Department	EP-381/2009	No	
AEIAR-148/2009	Proposed Development at Fung Lok Wai, Yuen Long at Lot 1457 R.P. in D.D.123	Mutual Luck Investment Limited	N/A		
AEIAR-121/2008	Harbour Area Treatment Scheme (HATS) Stage 2A	Drainage Services Department	EP-322/2008, EP-322/2008/A, EP-322/2008/B, EP-322/2008/C, EP-322/2008/D, EP-322/2008/E, EP-322/2008/F, EP-322/2008/G	No	
AEIAR-119/2008	Provision of Cremators at Wo Hop Shek Crematorium	Food and Environmental Hygiene Department	EP-329/2009	No	
AEIAR-118/2008	Upgrading of Pillar Point Sewage Treatment Works	Drainage Services Department	EP-321/2008, EP-321/2008/A, EP-321/2008/B	No	
AEIAR-120/2008	Proposed Comprehensive Development at Wo Shang Wai, Yuen Long	Profit Point Enterprises Limited	EP-311/2008, EP-311/2008/A, EP-311/2008/B, EP-311/2008/C, EP-311/2008/D	No	
AEIAR-117/2008	South East New Territories (SENT) Landfill Extension	Environmental Protection Department	EP-308/2008, EP-308/2008/A	Community Liaison Group	To effectively deal with and manage the potential odour problem, the Permit Holder shall, at least 3 months before commencement of construction of the Project, set up a Community Liaison Group involving representatives of potential sensitive receivers. The Permit Holder shall inform the Director in writing the membership and terms of reference of the Community Liaison Group. The Permit Holder shall place all minutes of meetings, the relevant documents and the associated papers of the Community Liaison Group on the dedicated website set up by the Permit Holder under Condition 4.2, within one month of the day of the meetings.
AEIAR-116/2008	Widening of Tuen Mun Road at Tsing Tin Interchange	Highways Department	EP-302/2008, EP-302/2008/A, EP-302/2008/B	No	

Register Number	Project	Applicant	Valid EP(s)	Requirement of Liaison	Details
AEIAR-125/2008	Wan Chai Development Phase II and Central-Wan Chai Bypass	Civil Engineering and Development Department	EP-356/2009 EP-364/2009, EP-376/2009, FEP-01/376/2009, FEP-02/356/2009, FEP-03/356/2009, FEP-01/364/2009, FEP-02/364/2009, EP-364/2009/A, FEP-05/364/2009/A, FEP-04/356/2009, FEP-06/364/2009/A, FEP-07/364/2009/A, EP-443/2012, EP-364/2009/B, EP-364/2009/C, FEP-09/364/2009/B, FEP-06/356/2009, FEP-10/364/2009/B, FEP-11/364/2009/B, FEP-07/356/2009, EP-482/2013	Community Liaison Group	The Permit Holder shall set up a Community Liaison Group (CLG) comprising representatives from the relevant concerned and affected parties, including owners' corporations, management offices, local committees and schools of affected areas, including the North Point and Tin Hau areas, to facilitate communication, enquiries and complaints handling on all environmental issues, including the follow up on the implementation of remedial mitigation measures. The Permit Holder shall set up the CLG before the commencement of construction of the relevant component(s) of the WDII and CWB Project. The Permit Holder shall notify the Director the actual date of setting up the CLG, the membership, the terms of reference and the contact details. A designated complaint hotline shall also be set up for the Project to address such concerns and complaints in an efficient manner. The detailed arrangements of the CLG shall be reported to the ENPC and its activities be reflected as update under Condition 2.5(a) of this Permit. .
AEIAR-123/2008	Development of a Bathing Beach at Lung Mei, Tai Po	Civil Engineering and Development Department	EP-388/2010	No	
AEIAR-114/2007	Decommissioning of the Former Kai Tak Airport Other than the North Apron	Civil Engineering and Development Department	Nil		
AEIAR-115/2007	Dredging Works for Proposed Cruise Terminal at Kai Tak	Civil Engineering and Development Department	EP-328/2009, EP-328/2009/A	No	
AEIAR-112/2007	Landslide Preventive Works at Po Shan, Mid-levels - Natural Terrain Risk Mitigation Measures	Geotechnical Engineering Office, Civil Engineering and Development Department	Nil		
AEIAR-113/2007	Harbour Area Treatment Scheme (HATS) - Provision of Disinfection Facilities at Stonecutters Island Sewage Treatment Works	Drainage Services Department	EP-295/2007, EP-295/2007/A, EP-295/2007/B, EP-295/2007/C	No	
AEIAR-111/2007	North East New Territories (NENT) Landfill Extension	Environmental Protection Department	EP-292/2007	Community Liaison Group	To enhance transparency and communication with the public, the Permit Holder shall, within 3 months before commencement of construction of the Project, set up a Community Liaison Group involving relevant stakeholders and shall take a proactive approach to disseminate information to the local community, promote community cooperation and participation and implement suitable local environmental enhancement works. All relevant information of the project including the detailed design, the progress of construction and operation and environmental monitoring and audit results shall be provided to the Community Liaison Group. The Permit Holder shall inform the Director in writing the membership and terms of reference of the Community Liaison Group. The Permit Holder shall make the minutes of the Community Liaison Group meetings and all papers and documents available to the public through a website.
AEIAR-109/2007	Laying of Western Cross Harbour Main and Associated Land Mains from West Kowloon to Sai Ying Pun	Water Supplies Department	EP-273/2007	Community Liaison Office	The Permit Holder shall set up and operate a Community Liaison Office throughout the construction of the Project to receive and respond to complaints or enquires on environmental nuisances or pollution caused by the Project and to implement remedial mitigation measures
AEIAR-108/2007	Drainage Improvement in Sha Tin and Tai Po	Drainage Services Department	EP-303/2008	No	
AEIAR-108/2007	Drainage Improvement in Northern New Territories - Package C	Drainage Services Department	EP-277/2007, EP-277/2007/A	No	

Register Number	Project	Applicant	Valid EP(s)	Requirement of Liaison	Details
AEIAR-107/2007	Permanent Aviation Fuel Facility for Hong Kong International Airport	Airport Authority Hong Kong	EP-262/2007, EP-262/2007/A, EP-262/2007/B	Community Liaison Group	To enhance communication with the local community, the Permit Holder shall, within three months after commencement of construction of the Project, set up a Community Liaison Group comprising relevant stakeholders to advise on and monitor the proper design, construction and operation of the Project and shall inform the Advisory Council on the Environment (ACE) and the Director in writing the membership and terms of reference of the Community Liaison Group and shall take into account ACE's views. The Permit Holder shall place all minutes of meetings, the relevant documents and the associated papers of the Community Liaison Group on the dedicated website set up by the Permit Holder under Condition 6.2, within one month of the day of the meetings.
AEIAR-104/2007	Relocation of Yiu Lian Floating Dock No. 3	Yiu Lian Dockyards Limited	EP-266/2007	No	
AEIAR-106/2007	Liquefied Natural Gas (LNG) Receiving Terminal and Associated Facilities	Castle Peak Power Company Limited	EP-257/2007	No	
AEIAR-105/2007	A Commercial Scale Wind Turbine Pilot Demonstration at Hei Ling Chau	Castle Peak Power Company Limited	EP-256/2006	No	
AEIAR-102/2006	Emissions Control Project at Castle Peak Power Station "B" Units	Castle Peak Power Company Limited	EP-251/2006	No	
AEIAR-103/2006	Yuen Long, Kam Tin, Ngau Tam Mei & Tin Shui Wai Drainage Improvement Stage 1, Phase 2B - Kam Tin Secondary Drainage Channel KT13	Drainage Services Department	EP-263/2007. EP-263/2007/A	No	
AEIAR-101/2006	Repositioning and Long Term Operation Plan of Ocean Park	Ocean Park Corporation	EP-249/2006, EP-249/2006/A, EP-249/2006/B, EP-249/2006/C, EP-249/2006/D	No	
AEIAR-100/2006	Hong Kong Convention and Exhibition Centre, Atrium Link Extension	Hong Kong Trade Development Council	EP-239/2006, EP-239/2006/A, EP-239/2006/B	No	
AEIAR-098/2006	Lamma Power Station Units L4 & L5 Flue Gas Desulphurization Plant Retrofit Project	The Hong Kong Electric Co. Ltd.	EP-248/2006	No	
AEIAR-097/2006	Main Arena of the 2008 Olympic Equestrian Event	The Hong Kong Jockey Club	EP-236/2006	Community Liaison Channel	shall propose a community liaison channel which shall be set up during the construction and reinstatement of the Project to service complaints, comments, suggestions or requests for information.
AEIAR-096/2006	Proposed Karting Track in D.D.134, Lung Kwu Sheung Tan, Tuen Mun	HGH Limited	EP-244/2006, EP-244/2006/A, EP-244/2006/B, EP-244/2006/C	No	
AEIAR-099/2006	Drainage Improvement in Northern Hong Kong Island - Hong Kong West Drainage Tunnel	Drainage Services Department	EP-272/2007, EP-272/2007/A, FEP-01/272/2007/A, EP-272/2007/B, FEP-01/272/2007/B	Community Liaison Office	The Permit Holder shall set up and operate a community liaison office throughout the entire construction stage of the Project to receive and respond to complaints or enquiries on environmental nuisances or pollution caused by the Project and to follow up on the implementation of remedial mitigation measures/
AEIAR-094/2006	Helipad at Yung Shue Wan, Lamma Island	Civil Engineering and Development Department	EP-242/2006, EP-310/2008	No	
AEIAR-095/2006	Expansion of Heliport Facilities at Macau Ferry Terminal	Civil Aviation Department	EP-286/2007, FEP-01/286/2007, EP-286/2007/A, EP-286/2007/B	Community Liaison Office	A complaint investigation procedure shall be set up at least two weeks before the commencement of construction of the Project. The complaint investigation procedure shall follow the requirements set out in the EM&A programme. The Permit Holder shall set up and operate a Community Liaison Office throughout the construction of the Project to receive and respond to complaints or enquires on environmental nuisances or pollution caused by the Project and to implement remedial mitigation measures
AEIAR-091/2005	Proposed Extension of Public Golf Course at Kau Sai Chau Island, Sai Kung	The Hong Kong Jockey Club	EP-224/2005, EP-224/2005/A	No	
AEIAR-092/2005	Further Development of Tseung Kwan O Feasibility Study	Civil Engineering and Development Department	N/A		

Register Number	Project	Applicant	Valid EP(s)	Requirement of Liaison	Details
AEIAR-093/2005	Drainage Improvements in Southern Lantau	Drainage Services Department	EP-237/2005, EP-237/2005/A, EP-237/2005/B, EP-237/2005/C, EP-434/2012, EP-434/2012/A	No	
AEIAR-090/2005	Road P1 Advance Works at Yam O on Lantau Island	Civil Engineering and Development Department	EP-228/2005	No	
AEIAR-088/2005	Drainage Improvement in Tsuen Wan, Kwai Chung and Tsing Yi, Tsuen Wan Drainage Tunnel	Drainage Services Department	EP-275/2007, FEP-01/275/2007, EP-275/2007/A, FEP-01/275/2007/A, EP-275/2007/B, FEP-01/275/2007/B, FEP-02/275/2007/B, EP-275/2007/C	No	
AEIAR-087/2005	Peng Chau Helipad	Civil Engineering and Development Department	EP-241/2006, EP-241/2006/A, EP-293/2007	No	
AEIAR-089/2005	New Contaminated Mud Marine Disposal Facility at Airport East / East Sha Chau Area	Civil Engineering and Development Department	EP-312/2008, EP-312/2008/A, EP-427/2011, EP-427/2011/A	No	
AEIAR-086/2005	Development of an EcoPark in Tuen Mun Area 38	Environmental Protection Department	EP-226/2005, EP-226/2005/A, EP-226/2005/B, EP-226/2005/C	No	
AEIAR-084/2005	Trunk Road T4 in Sha Tin	Civil Engineering and Development Department	N/A	No	
AEIAR-085/2005	Drainage Improvements in Sai Kung	Drainage Services Department	EP-217/2005	No	
AEIAR-082/2004	Siu Ho Wan Water Treatment Works Extension	Water Supplies Department	EP-207/2005	No	
AEIAR-080/2004	Renewable Energy by a Wind Turbine System on Lamma Island	The Hongkong Electric Co. Ltd	EP-201/2004	No	
AEIAR-083/2005	Kowloon Southern Link	Kowloon-Canton Railway Corporation	EP-215/2005, EP-215/2005/A, FEP-01/215/2005/A, FEP-02/215/2005/A, FEP-03/215/2005/A, EP-215/2005/B, EP-01/215/2005/B, FEP-04/215/2005/B	Community Liaison Office	A Community Liaison Office shall be set up prior to the commencement of construction and during the construction of the Project to service complaints, comments, suggestions or requests for information. The Director shall be notified of the date of setting up the Community Liaison Office at least 2 weeks before the commencement of construction of the Project. (see notes 8 and 9)

## **Appendix 7.2 Comments on EIA Report of South Island Line (East) Received by EPD**

### **EIA Report on South Island Line (East)**

#### **Summary of the Public Comments**

The EIA report was exhibited for public inspection from 10 August 2010 to 8 September 2010. During the inspection period, a total of 45 sets of public comments have been received by Environmental Protection Department. The following is a summary of the major public comments:

2. Majority of the public comments are related to potential environmental impacts due to construction activities at the Telegraph Bay Barging Point (TBBP). The general concerns are:-

- Air quality impact due to the dump-trucks travelling to and from the TPPB;
- Construction dust impact and marine pollution due to the operation of the TBBP;
- Change in flow regime due to the TPPB causing impact on octocoral communities at Telegraph Bay; and
- Large amount of tunnel spoils and the requirements of waste management plan.

3. Other environmental concerns include:

- The location of ventilation plant building and its associated operational noise, air quality and heat pollutions;
- The railway noise impact from the viaduct section;
- The landscape and visual impact from the viaduct section and its noise barriers;
- The construction dust impacts on the nearby air sensitive receivers; and
- The ground-borne noise impact due to the operation of the SIL(E).

\* Information was obtained through application for Access to Information.  
The content of this document is not modified.

Appendix 7.3 Attendance of Telegraph Bay Barging Point CLG

				District Council Advisor		Local Stakeholder Representatives					
				Representative of Southern District Council		Assistant to Counciltillor		Bel-air	Bel-air	Bel-air	Bel-air
				Name	Mr Paul Zimmerman	Mr Denis Leung	Dr Edmund Li	Mr Anthony Yeung	Mr Spencer Chao	Mr Napoleon Chung	Ms Monica Leung
Meeting Number	Date	Time	Venue								Mr William Fok
1st	24-Feb-11	8:00pm - 9:30pm	Meeting Room 1-3, Cyberport								
2nd	28-Apr-11	6:00pm - 7:30pm	Training Room 1-2, Cyberport								
3rd	18-Jul-11	8:00pm - 9:30pm	Meeting Room 1-3, I4, Cyberport 1								
4th	27-Oct-11	8:00pm - 9:30pm	Meeting Room 1-3, I4, Cyberport 1								
5th	27-Feb-12	8:00pm - 10:00pm	Meeting Room 1-3, I4, Cyberport 1								
6th	24-May-12	7:00pm - 8:00pm	Video Conference Room, I4, Cyberport 1								
7th		8:00pm - 9:30pm	Video Conference Room 2, I3, Core C, Cyberport 3								
8th	26-Sep-12										
9th	13-Dec-12	8:00pm	Meeting Room 1-3, I4, Cyberport 1								
10th	13-Mar-13	8:00pm	Video Conference Room 2, I3, Core C, Cyberport 3								
11th	13-Jun-13	8:00pm	Video Conference Room 2, I3, Core C, Cyberport 3								
12th	10-Sep-13	8:00pm	Meeting Room 1-3, I4, Cyberport 1								
13th	29-May-14	8:00pm	Video Conference Room 2, I3, Core C, Cyberport 3								
14th	29-Sep-14	8:00pm	Video Conference Room 2, I3, Core C, Cyberport 3								
15th	4-Feb-15	8:00pm	Video Conference Room 2, I3, Core C, Cyberport 3								
	2-Sep-15	8:00pm	Video Conference Room 2, I3, Core C, Cyberport 3								

				Representative of Scenic Villa	Scenic Villa	Agean Terrace	Agean Terrace	Agean Terrace	Agean Terrace	HKU Staff Quarters	HKU Estates Offices
				Name	Mr Pindar Wong	Mr Francis Lee	Mr Lionel Krieg	Mr CP Ho	Ms Eva Shiu	Ms Susie Cheung	Dr Peter Cunich
Meeting Number	Date	Time	Venue								
1st	24-Feb-11	8:00pm - 9:30pm	Meeting Room 1-3, Cyberport								
2nd	28-Apr-11	6:00pm - 7:30pm	Training Room 1-2, Cyberport								
3rd	18-Jul-11	8:00pm - 9:30pm	Meeting Room 1-3, I4, Cyberport 1								
4th	27-Oct-11	8:00pm - 9:30pm	Meeting Room 1-3, I4, Cyberport 1								
5th	27-Feb-12	8:00pm - 10:00pm	Meeting Room 1-3, I4, Cyberport 1								
6th	24-May-12	7:00pm - 8:00pm	Video Conference Room, I4, Cyberport 1								
7th		8:00pm - 9:30pm	Video Conference Room 2, I3, Core C, Cyberport 3								
8th	26-Sep-12										
9th	13-Dec-12	8:00pm	Meeting Room 1-3, I4, Cyberport 1								
10th	13-Mar-13	8:00pm	Video Conference Room 2, I3, Core C, Cyberport 3								
11th	13-Jun-13	8:00pm	Video Conference Room 2, I3, Core C, Cyberport 3								
12th	10-Sep-13	8:00pm	Meeting Room 1-3, I4, Cyberport 1								
13th	29-May-14	8:00pm	Video Conference Room 2, I3, Core C, Cyberport 3								
14th	29-Sep-14	8:00pm	Video Conference Room 2, I3, Core C, Cyberport 3								
15th	4-Feb-15	8:00pm	Video Conference Room 2, I3, Core C, Cyberport 3								
	2-Sep-15	8:00pm	Video Conference Room 2, I3, Core C, Cyberport 3								

				Officer in-charge, Southern District Council	Officer in-charge, Southern District Council	Southern District Council	Engineer, Highway Department	Engineer, Highway Department	Railway Development Office, HyD	Railway Development Office, HyD	Senior Engineer/ Priority Railway 3, Transport Department
				Title	Mr Chiu Sau-chan	Mr Derrick Lam	Mr George Li	Mr Albert Wong	Mr John Cho	Ms Yanny Li	Mr Eric Fung
Meeting Number	Date	Time	Venue	Name							Mr David Chan
1st	24-Feb-11	8:00pm - 9:30pm	Meeting Room 1-3, Cyberport								
2nd	28-Apr-11	6:00pm - 7:30pm	Training Room 1-2, Cyberport								
3rd	18-Jul-11	8:00pm - 9:30pm	Meeting Room 1-3, I4, Cyberport 1								
4th	27-Oct-11	8:00pm - 9:30pm	Meeting Room 1-3, I4, Cyberport 1								
5th	27-Feb-12	8:00pm - 10:00pm	Meeting Room 1-3, I4, Cyberport 1								
6th	24-May-12	7:00pm - 8:00pm	Video Conference Room, I4, Cyberport 1								
7th		8:00pm - 9:30pm	Video Conference Room 2, I3, Core C, Cyberport 3								
8th	26-Sep-12										
9th	13-Dec-12	8:00pm	Meeting Room 1-3, I4, Cyberport 1								
10th	13-Mar-13	8:00pm	Video Conference Room 2, I3, Core C, Cyberport 3								
11th	13-Jun-13	8:00pm	Video Conference Room 2, I3, Core C, Cyberport 3								
12th	10-Sep-13	8:00pm	Meeting Room 1-3, I4, Cyberport 1								
13th	29-May-14	8:00pm	Video Conference Room 2, I3, Core C, Cyberport 3								
14th	29-Sep-14	8:00pm	Video Conference Room 2, I3, Core C, Cyberport 3								
15th	4-Feb-15	8:00pm	Video Conference Room 2, I3, Core C, Cyberport 3								
	2-Sep-15	8:00pm	Video Conference Room 2, I3, Core C, Cyberport 3								

				Title Manager- Environmental Engineer	Environmental Engineer	Environmental Engineer	Project Manager - SIL Civil	Construction Manager - SIL Civil	Senior Construction Engineer - Civil	Construction Engineer II-SIL Civil	Senior Construction Engineer
				Name	Mr Richard Kwan	Mr MK Cheung	Cyrus Leung	Mr Mark Cuzner	Mr Ken Wong	Mr Gregory Lo	Mr Nick Lam
Meeting Number	Date	Time	Venue								
1st	24-Feb-11	8:00pm - 9:30pm	Meeting Room 1-3, Cyberport								
2nd	28-Apr-11	6:00pm - 7:30pm	Training Room 1-2, Cyberport								
3rd	18-Jul-11	8:00pm - 9:30pm	Meeting Room 1-3, I4, Cyberport 1								
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6th	24-May-12	7:00pm - 8:00pm	Video Conference Room, I4, Cyberport 1								
7th		8:00pm - 9:30pm	Video Conference Room 2, I3, Core C, Cyberport 3								
8th	26-Sep-12										
9th	13-Dec-12	8:00pm	Meeting Room 1-3, I4, Cyberport 1								
10th	13-Mar-13	8:00pm	Video Conference Room 2, I3, Core C, Cyberport 3								
11th	13-Jun-13	8:00pm	Video Conference Room 2, I3, Core C, Cyberport 3								
12th	10-Sep-13	8:00pm	Meeting Room 1-3, I4, Cyberport 1								
13th	29-May-14	8:00pm	Video Conference Room 2, I3, Core C, Cyberport 3								
14th	29-Sep-14	8:00pm	Video Conference Room 2, I3, Core C, Cyberport 3								
15th	4-Feb-15	8:00pm	Video Conference Room 2, I3, Core C, Cyberport 3								
	2-Sep-15	8:00pm	Video Conference Room 2, I3, Core C, Cyberport 3								

Appendix 7.3 Attendance of Telegraph Bay Barging Point CLG

Meeting Number	Bel-air	Bel-air	Bel-air	Bel-air	Bel-air	Bel-air	Bel-air	Bagulo Villa	Bagulo Villa	Bagulo Villa	Scenic Villa
	Ms Winnie Wong	Ms Veronica Li	Ms Janet Chung	Mr Cheung Yin-ming	Mr Wayne Yeung	Mr Daniel Fok	Mr Szeto Chi-leung	Mr Michael Tse	Mr Wailen Chui	Mr Wong Chi Wah	Mr Robert Collins
1st											
2nd											
3rd											
4th											
5th											
6th											
7th											
8th											
9th											
10th											
11th											
12th											
13th											
14th											
15th											

Meeting Number	HKU Estates Offices	HKU Estates Offices	Cyberport	Cyberport	Cyberport Tenants	West Island School	The ISF Academy	United Barging Point	The Hong Kong
	Mr Raymond Hui	Mr Eddie Yiu	Mr Andy Ho	Mr Timothy Tam	Mr Deep Batra	Mr Betty Leung	Mr Benny Lee	Taskforce Ms Vivian Lau	Society of Rehabilitation Mr Rex Luk
1st									
2nd									
3rd									
4th									
5th									
6th									
7th									
8th									
9th									
10th									
11th									
12th									
13th									
14th									
15th									

Meeting Number	Transport Department	Project Management	Senior Engineer, DSD	Engineer, DSD
	Mr Sidney Lee	Division, DSD Mr Leo Lam	Mr Johnny Wong	Mr Stanley Chan
1st				
2nd				
3rd				
4th				
5th				
6th				
7th				
8th				
9th				
10th				
11th				
12th				
13th				
14th				
15th				

Meeting Number	Senior Liaison Engineer	Senior Liaison Engineer	Public Relations Manager - Projects and Property	Assistant Public Relations Manager	Projects Communications Manager	Project Communications Manager, MTR
	Mr Bernard Wong	Mr Michael Leung	Ms Jackie Chow	Ms Samantha Siu	Mr Siu Kam-hang	Mr Kenrick Ko
1st						
2nd						
3rd						
4th						
5th						
6th						
7th						
8th						
9th						
10th						
11th						
12th						
13th						
14th						
15th						